

*Decarbonizing the Business –  
Achieving Carbon Neutrality in Line with Scientific Recommendations  
Executive Roundtable Summary  
Virtual Conference – October 7-8, 2020*

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## Background

IPCC reports indicate that climate change will fundamentally impact our societies and economies. Risks from carbon-intensive business models have already made several investors divest from coal and other fossil fuel-based assets and further adjust their analysis and allocations in alignment with the decarbonization imperative. In the meantime, social movements, driven especially by young people who are already changing lifestyles e.g. on food, mobility and clothing, are powerfully transforming markets. Business is witnessing that these changes are here already, and that governments are acting to accelerate the transition towards decarbonized economies. With a clear business case for decarbonization in mind, hundreds of major global companies have committed to reach net-zero emissions between 2030 and 2050. This Roundtable was designed to share goals and strategies, and to lead the global decarbonization efforts. 53 senior executives from 10 countries joined the conversation, including 43 representatives from 27 global companies.

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## Participants

### Host

- Lars Murawski, Vice President  
Corporate EHS + S, Boehringer Ingelheim



### Moderators and Facilitators

- Arabesque: Georg Kell
- Boehringer Ingelheim: Lars Murawski
- ERM: Alexander Cox
- Dow: Dr. Nicoletta Piccolrovazzi
- World Environment Center: Glenn Prickett  
Smitha Konduri/Frank Werner (Facilitation)

### Speakers

- BP: Dr. Paul Jefferiss
- Danone: Marie-Pierre Bousquet Lecompte
- F. Hoffmann-La Roche: Thomas Wolf
- Microsoft: Adina Braha-Honciuc
- Potsdam Institute for Climate Impact Research:  
Prof. Dr. Stefan Rahmstorf
- Trane Technologies: W. Scott Tew
- Volkswagen: Ralf Pitzner
- World Economic Forum: Anthony Hopley

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## Key Points

- (1) 2020 should be the year when global CO<sub>2</sub>-emissions reach their peak, but being realistic, 2025 must be the year.** With every year that absolute greenhouse gas emission reductions are delayed the transition towards zero emissions must go faster in the following years. This is due to the fact that accumulated emissions in the atmosphere are causing temperature rise. With the world currently emitting 40-45 gigatons per year and a total budget of approximately 600 gigatons left to reach the goal of the Paris Agreement, it is simple math to realize that the budget will be used up quickly. While a soft and steady transition of global companies to net zero emissions by 2050 seemed to be

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good enough when the Paris Agreement was signed, we are in a different situation now. Companies generally understand that a foreseeable peak of global emissions in 2025 is forcing all actors globally to get to net zero emissions by 2035, something that is hardly possible to achieve. That is why it is so important for every company and every country to have its own peak of emissions, if possible, by 2020, allowing them to fully decarbonize within a time frame of 20 years. Business representatives are generally supporting this call of science and many companies have implemented this goal already. Encouragingly, a few have recently even reduced absolute emissions while growing their business. To be clear: not a single participant in this event questioned if man-made climate change is real. On the contrary, scientific insight was taken most seriously – from the explanation that natural caused radiative forced temperature rise (e.g. solar) is negligible to the insight that a 15% weakening of the Gulf stream system over the last 100 years has been detected (causing a measured cooler subpolar North Atlantic region).

- (2) The burning of forests reduces the budget for all stakeholders even further.** Thus, if the forest burning cannot be stopped, emissions from industry and other actors must be reduced even faster to keep temperature rise within 1.5-2°C. Examples of companies that are working with their suppliers to eliminate deforestation from their supply chains by 2020 have been given during the roundtable.
- (3) Several times a clear and encouraging message was repeated: Decarbonizing all sectors entirely seems to be possible now:** the technology is available, the cost is manageable, the capital is provided, and the mindsets are open for collaboration on this topic. This was emphasized by the decarbonization strategies of all companies highlighted during the event, as all of them include Scopes 1, 2, and 3 and address net zero emissions at least by 2050, with interim goals and measures until 2030. These companies are from industry sectors as different as the agroindustry, automobile, pharmaceutical, industrial processes, oil & gas, and the software industry. Examples have also been provided from the shipping industry and other hard to abate sectors. To make a shift to radically new technologies economical, many companies are cross-subsidizing innovative solutions with earnings from profitable, though less sustainable solutions that they currently sell in the market. Companies can change their portfolio substantially and even reinvent themselves, when they can rely on internal buy-in, incentives from top management, a clear set of goals, and clear measures how to implement the goals.
- (4) In practice companies find it realistic to fully decarbonize their own operations (Scope 1 and 2 emissions) before 2050.** They generally start by setting interim goals for 2030 to reduce emissions by 30-50% through a combination of measures effectively at the source (energy efficiency measures or process changes) and investments in renewable energy. Some companies are even more ambitious. Massive improvements are predicted in the supply of renewable energy, green power, green hydrogen, electrification, and other infrastructure to produce e.g. liquid fuels over the next years in this decade.

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All companies state that Scope 3 emissions are the real challenge, as those often represent more than 90% of GHG-emissions and, as they occur in the value chain or use phase of the product, they are difficult to tackle.

- (5) The real challenge is to decarbonize Scope 3 emissions.** It is a value in itself that companies are taking responsibility for these emissions and that they are expected to do so. Whether it is a complex and non-transparent supply chain or a product that is built on fossil fuels, each is an enormous challenge. Companies are arguing that they have no alternative to tackling Scope 3 emissions as capital markets have begun to divest from carbon intensive businesses and customers are demanding a reduced carbon footprint. Furthermore, as technological solutions are available, they are being applied by competitors.

*When working with suppliers it is important to get aligned on what is material:* some companies refer to the urgency to identify and tackle “hot spots” (suppliers of carbon intensive components), e.g. by incentivizing the component producer to make use of efficiency options and to use renewable energies. In parallel, collaboration with large Tier 1 suppliers can be achieved to explore how they can support the customer’s goals (incl. carbon reductions through circular economy solutions), while the many smaller suppliers in developing countries can be incentivized to join capacity building activities.

*Leading food producing companies,* on the other hand, work with farmers to transition towards regenerative agriculture to restore soils and enhance their capacity to capture GHGs, to empower a new generation of farmers to apply advanced technologies and practices, and to apply the best mix of biological and chemical fertilization techniques while respecting animal rights and experimenting with climate-friendly diets.

*Reducing the product’s carbon footprint* for the benefit of B-2-B customers and end consumers is a matter of competitiveness as product features decide upon its acceptance in an evolving market. Only the availability of green energy can substantially reduce the carbon footprint of electric and hydrogen-driven vehicles. Only the full transition to selling renewable energies to customers instead of fossil fuels can get an oil & gas company to net zero emissions. And a provider of components to the built environment, whether it is heating, cooling or the building material, can reduce vast amounts of Scope 3 emissions. Although continuously under development, much of the technology needed is here already.

*Software companies* have other options to reduce Scope 3 emissions. With their ability to identify, track, and evaluate potentials for energy efficiencies as well as to scale solutions, they are in a position to accelerate systemic change. Some have started to support the funding of technological

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solutions provided e.g. by start-up companies and bring them to scale. They may benefit from the carbon credits that large-scale achievements bring about.

- (6) Controversy if offsetting emissions is a viable solution.** While all participants agreed that energy efficiency measures, the use of renewable energies and reduced consumption are preferable to offsetting, no company can do completely without, at least on Scope 3 emissions. Companies that abstain as much as possible from offsetting refer to *economic arguments* such as the cost of offsetting certificates that still do not help to address all the other negative impacts associated with energy use such as the continuing energy costs, the costs for capital intensive energy infrastructure, supply availability, other environmental impacts, etc. They also refer to the challenge that forests store additional CO<sub>2</sub> only while they grow, leaving uncertainty how long an afforestation project serves its purpose, and to the risk that a fire may destroy a costly investment. From their point of view, most offsetting projects are rather risky compared to striving for complete avoidance of emissions, also because offsetting opportunities get fewer the more companies are getting interested. This is backed by [research of natural scientists](#), who argue that less suitable surfaces are available than often stated by economic experts, and that most of such plantations bear the risk of triggering potentially irreversible changes in the Earth system – through extensive land-use change, water use, alteration of biogeochemical flows and compromising biosphere integrity. Furthermore, climate change poses the risk that current trees in a region may not be suitable in a warmer and drier future.

*On the other hand*, given the fact that some emissions cannot be avoided in supply chains, even the skeptical companies are making use of purchasing carbon credits. And those companies that invest heavily in offsetting may be capturing CO<sub>2</sub> from the atmosphere at a faster pace (and thus with a greater impact on the carbon budget) than if they would have waited for their energy reduction investment to be finalized. At the same time economic and environmental co-benefits may be achieved.

Recently the strategic plan to remove large amounts of CO<sub>2</sub> from the atmosphere to compensate for historical emissions of a company has caught the attention of the business community. Although well received in principal, it is not completely understood to what extent these removals are designed to avoid any alterations of ecosystems and how well a long-term storage can be guaranteed in these projects. An interesting, potentially viable idea that has been touched during the discussions is the extensive use of wood as a carbon sink and replacement of concrete when building future cities.

- (7) Financial markets** are effectively making clear to industries that are heavily dependent on fossil fuels that the financial risk is growing. Many investors are now rewarding climate action, demonstrated e.g. by observed steep rises of share prices on the days when brands announced ambitious decarbonization goals\*. At the same time the Kodak moment\* in the early 2000s has been a learning

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lesson: the film and photo company Kodak, then the market leader, was still extremely profitable when consumers very quickly turned their backs on Kodak, buying a new technology called digital cameras from Kodak's competitors, and thus killing within a few years what had once been a proud company. In the future, decarbonization requirements are predicted to initiate such radical technology shifts. As regulators have shown in the past that they tend to act late, however often with severe regulation, capital markets anticipate that overreactions may occur and even kill companies before investors can divest. Roundtable participants referred to government reactions to the COVID-19 pandemic as an example to demonstrate their ability to act fast and comprehensively. Current subsidies for fossil fuel dependent industries, also referred to as "perverse subsidies", have been addressed. Once there is a political will they can quickly be stopped, leaving no time to adapt.

- (8) When it comes to climate change WINNING SLOWLY IS THE SAME AS LOSING**, as Anthony Hogley put it. Several companies are now calling for an alignment between capital markets, industries, governments, and other actors to increase the speed and scale of decarbonization. According to Roundtable participants, lack of money or lack of ideas is not an issue. What is needed is a new focus within companies' internal organization, to shift support towards decarbonization efforts and to align them with financial markets' expectations. Furthermore, early and predictable government regulation is needed as well as alliances for decarbonization. Many alliances already exist, and several have been mentioned: the [Alliance of CEO Climate Leaders](#), the [TCFD initiative](#), the [Science Based Targets Initiative](#), and the [Mission Possible Platform](#) (a sector decarbonization platform by the World Economic Forum that is underscoring how it is possible to decarbonize even in the harder to abate sectors). These alliances help business leaders to understand what is already in reach and where market opportunities develop.

Several companies are already using a systems approach, i.e. addressing solutions that can make entire systems far more energy efficient and thus going beyond making their own products more efficient. Amongst the commitments made by individual companies that provide solutions (e.g. to the built environment, the food system and the mobility system) participants heard e.g. from one company that committed to invest in new products/components that will save the world 1 gigaton CO<sub>2</sub>e. It is happening now only because the technologies are out there, the priorities of major actors have shifted, and the business opportunities have become real. But this is not enough: several participants mentioned that their companies advocate for government regulation in favor of the Paris agreement, for concrete measures such as strategic electrification, and more. Collaboration is essential for this.

\*Presentation held on Oct 8, 2020 at WEC's Roundtable by Anthony Hogley (Mission Impossible Platform, World Economic Forum)

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