

## WHAT:

Population growth coupled with the rise of the middle class in emerging markets and expanded commodity and consumer goods production is leading to higher consumption rates. As a result, the stress on natural and materials resources has dramatically increased. Simultaneously, companies experience greater business risks from supply chain disruptions, price volatility and conflicts over scarce resources as well as uncertain policy frameworks. The availability of resources is directly linked to core business practices and has an immense impact on the resilience of a company. Resource efficiency and productivity are therefore key enablers of business performance as well as the development of innovative, sustainable business models and strategies.

The objectives of this Roundtable included:

- Examine different types of innovation emerging within a world of restrained resources
- Discuss what data is needed to track resource productivity
- Review risks associated with resource scarcity and how they might affect business resilience and adaptation.

## WHO:

The Roundtable was structured to provide a highly interactive process of discussion amongst 34 sustainability experts from seven countries: 65% of participants came from WEC member companies, 9% from non-member companies, and 26% from NGOs/academia.

### HOST

ERM: Graham Lane, Business Development Director – Central Europe

### MODERATORS

Global Nature Fund: Stefan Hörmann

ERM: Peter Fink, Vijay Gudivaka

Marks & Spencer: Mike Barry

University of Würzburg: Prof. Dr. Marcus Wagner

WEC: Dr. Terry F. Yosie

### SPEAKERS

Apple: Rudolf Auer

Audi: Reinhard Otten

Collaborating Center on Sustainable Consumption and Production: Dr. Dick van Beers

E.ON: Dr. Sopna Suri

ERM: Vijay Gudivaka

IBM: Kurt van der Herten

Ricoh: Yasunori Naito

University of Augsburg: Prof. Dr. Armin Reller

University of Wuerzburg: Prof. Dr. Marcus Wagner

Volkswagen: Prof. Dr. Gerhard Prätorius

World Economic Forum: Bernice Lee

## MAJOR POINTS OF DISCUSSION:

- (1) **Resource markets have always been politically influenced and in the face of increased resource scarcity this is likely to be reinforced, by price volatilities in key resources and commodities as the new normal.** The situation with regards to many critical resources such as water is deteriorating – in order to meet the anticipated demand across all segments, additional supply would have to accelerate by up to 250% within the next 20 years vs. the past 20 years. However, even though many resources are becoming scarcer, market signals don't reflect that scarcity. Therefore, it is essential to find ways to improve resource efficiency, but also to explore new business models such as collaborative consumption and the circular economy as well as to create a framework of collaborative governance with greater clarity and rules. This can help to develop solutions for challenges that are beyond the ability of any single institution to resolve.
- (2) **Investments in large, renewable projects are impacted by competing forces.** On the one hand, heterogeneous and volatile regulatory frameworks erode investors' confidence in renewable investments and larger and more sophisticated society groups increase the challenge for getting consent. This confirms a general trend towards a growing importance of non-technical issues in investment decision making and risk management. On the other hand, scale effects and innovation are reducing costs. To avoid being hit too hard by changing frameworks, companies from e.g. the automobile industry are generally following a rather costly strategy by diversifying into different technologies at the same time. Alternatively a few companies within the industry are investing into transformational technological change under instable framework conditions, thereby facing the challenge to convince their shareholders, government and other stakeholders to support their strategy.
- (3) **Multiple innovation strategies are evolving within and across business sectors.** Apparently product innovation is moving from within corporations' internal laboratories towards new collaborative schemes that include multiple small, flexible start-ups. Furthermore, new technological opportunities enable different industries to collaborate on (a) new generations of products (e.g. automobiles serving as accumulators for renewable energy, or computers dramatically transforming the use of automobiles) and (b) management practices to e.g. collect used products, thereby not only reducing landfill but also retaining resources supply (e.g. IT industry learning from retailers).
- (4) **Few companies are able to state with certainty that they have information on resources critical for their operations readily available.** At the same time a growing information demand from various stakeholders coupled with stricter regulations force companies to gather ever more metrics. IT solutions will be of limited use to solve this unless companies are first going through a thorough analysis to clarify the value of gathering all these data. Apparently the trend towards greater transparency will not only increase for products (concerning ingredients and footprints), but also for processes along the value chain. This implies a need to simplify the supply chain to handle transparency requirements, however, this will not happen anytime soon. On the contrary, the complexity is growing, something which can be seen in the increasing number of elements that are used for single products.
- (5) **The increase in the number of different materials used, poses a big challenge for the implementation of a circular economy.** There is a need to radically improve the dialogue along supply chains with minerals providers, product manufacturers, consumers, recycling specialists, and potential customers of recycled substances. Adding to this, a large number of materials simply vanish in the after-use phase of many products. Such dissipation – commonly underestimated - is a very serious problem, underlining the importance of improved communication along the value chain. Due to price volatility and the threat of political conflicts over e.g. rare metals, companies are looking into ways to close the product loop, although there is still a long way to go. In contrast to earlier debates on a circular economy, the discussion is now CEO-led and companies have discovered that there may be a competitive advantage. Front-runners such as Ricoh, have already turned this concept into a new business model.