



**Kurt Bock**  
CEO, BASF

A stylized, handwritten signature of Kurt Bock in black ink, written in a cursive script.

"Limiting [global] warming to 2C involves substantial technological, economic and institutional challenges".

This quote from the Fifth Assessment Report of the Intergovernmental Panel on Climate Change points out the scale of progress demanded from our society to address climate change. As a business, we will play an important role to find the answers to this challenge and related issues, such as the availability of water and raw materials.

The challenge will be to develop solutions, which enable the growing world population to attain a high standard of living while using resources most efficiently. With an adequate regulatory framework in place, and guided by an agenda for sustainable development as laid out by the UN, the economy will be able to act as a "broker" and facilitate the best possible distribution of limited resources.

At the same time, substantial technological innovations are required to enable every human being to lead a "good life" without overusing the resources. These technological innovations are mainly driven by enterprises: in order to be able to assert themselves in competition, they invest in research and development and introduce new technologies into the market.

Both the incremental further development of existing products as well as game-changer innovations are key contributions to this end. For example, BASF has continuously been improving and developing insulating materials that help in significantly

lowering the energy demand of houses. At the same time, we have been innovating in order to reduce the fossil fuel demand and associated carbon emissions in transportation radically, starting with lighter materials. Realizing that electric cars with an increased battery performance will allow for larger cruising ranges and thus "change the game", we began to work intensively on materials for more efficient batteries.

Just as we drive product innovations, we also further develop our own production processes. Since 1990, we have reduced the greenhouse gas intensity of our production by 74%. In order to continue on this path, we just set ourselves the new corporate target to implement energy efficiency management systems at all our production sites by 2020. However, we have to realize that the technological improvement of existing processes has physical limits. That is why we are also looking for disruptive innovations for our production processes. In this respect, I am convinced that cross-sectoral co-operations play an important role. Together with ThyssenKrupp and Linde, for example, we are working on a new process for the production of hydrogen (a basic material for the chemical industry) that is much more carbon efficient than the conventional process and at the same time delivers metallurgical carbon for use in the steel industry. Similarly, we have teamed up with other chemical companies in a Low Carbon Technology Partnership initiative. Jointly we are analyzing the potential of various game-changing innovations for carbon emission reduction in chemical production.

The potential that enterprises have for driving technological innovations for a low-carbon future can also be seen in our R&D expenditure. BASF spends more than 50% of its annual R&D budget of 1.9 billion euros on solutions in the area of climate protection and energy and resource efficiency.

And this is where we come full circle – back to the regulatory framework mentioned at the beginning. The investments in R&D are always long-term oriented with the ultimate target to improve processes or go for new technologies. At COP-21, politicians have the chance to set up a long-term, reliable emission reduction framework, enabled by low-carbon technologies. The national contributions to this framework need to be globally harmonized. This is key as the economy will only be able to fulfill its role as a "broker" for the best possible global distribution of the limited carbon emission budget, if we have comparable levels of greenhouse gas reduction efficiency globally rather than regionally diverging concepts and measures.

I am convinced that with such an agreement in place, investments into incremental technological improvements as well as into R&D for breakthrough innovations would further increase. Creative minds in business all over the world would have a clear picture of the low-carbon future they are innovating for, finding answers to the substantial challenges we are facing.