With a still growing global population and the need to provide adequate food, infrastructure, mobility and health care for all these people, the question of material selection for these essential areas is a critical one. Starting with a global view on carbon footprint of polymers in comparison to other materials and non-material related needs, the excellent position of polyolefins – mainly polyethylene and polypropylene – in this respect will be highlighted. A number of application examples from simple to complex packaging solutions, infrastructure and mobility applications shall round off this introductory part.

In the view of general public, these advantages appear to be overshadowed by the problem of plastic waste. The actual size of this problem in different areas of the world will be put in perspective, followed by a roadmap on how to address it by structured collection and recycling on different levels. Again, examples for mechanical recycling of polyolefins – in pure as well as mixed form – in different application areas will be shown.