

Vision 2030

Recycling as a Key Function for a Sustainable Life

Product innovations, the development of alternative energy sources and, above all, the rising global population mean that the demand for plastics will continue to increase. At the same time the shortage of fossil raw materials is increasing. Asked about how this situation will continue to develop until the year 2030, the two CEOs of Erema GmbH of Ansfelden, Austria, Klaus Feichtinger and Manfred Hackl, speak with one voice: the key lies in the efficient utilization of plastic streams and the key function is in the recycling of plastics. Closed loops with high amounts of recycled material for high-quality products would also help plastic gain a positive image in society.

We know how important plastic is today. How will this importance progress up to the year 2030?

Hackl: Even greater importance will be attached to plastics in future. The benefits of this multifunctional material in terms of technology and design will drive forward innovations in many product sectors, such as lightweight automotive construction, for example, to reduce fuel and CO₂ consumption. Plastic consumption is currently growing at a rate of 8% every year worldwide, with around 7.2 billion people living on the planet earth. Forecasts estimate that global population will be in the region of 8.4 billion in the year 2030 and this will have an impact on the demand for plastics. The growth in population, however, will not be distributed evenly across all continents. While Europe's contribution to the global population will shrink from 18% to 8%, other regions of the planet will grow rapidly and disproportionately – and with them also the demand for raw materials. As, however, Europe has relatively low fossil energy resources and the areas for the production of biobased polymers are limited, the shortage in these areas will exacerbate and lead to an increase in prices. This means that in future we will have to drastically reduce our dependence on fossil raw materials such as crude oil or natural gas and we will have to do so in two ways. First we will have to succeed in closing the

loop of existing plastic streams by means of recycling. And secondly, because transport, heating and energy still currently account for 87% of crude oil consumption, we have to make more intensive use of the material benefits of plastics to obtain renewable energy and for lightweight engineering.

Feichtinger: The goal has to be as far as possible autonomous supply through closed recycling loops and renewable energy generation. Reliable, inexpensive and environmentally sound energy supply is a crucial factor in the sustainable development of modern societies. Material-driven innovations are of vital importance in further growth and the penetration of the market of

energy technologies. As polymer materials offer special potential here, they will become a driving force and thus be key materials in future developments.

What effects will this have on the plastics recycling industry?

Hackl: Enormous potential is developing, because plastics are becoming increasingly valuable as a secondary raw material. But to turn waste plastic into high-quality and accepted secondary raw material calls for intensive communication within the entire plastics industry – between raw material suppliers, plastics processors and recyclers. This is the basis for proper eco-design. Only then is it possible to develop new products which take into account their

Company Profile

Erema Group in figures:

- 4,000 Erema systems in operation around the world
- 450 employees in all 5 continents
- 115 million EUR turnover in fiscal year 2013/14
- 50 country representatives worldwide
- 14 million tonnes of plastic recycled every year with Erema systems
- 13 facilities for customer test runs at the international Erema trial centers
- 10 regional centers around the globe for technical support

Service

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About the Interviewee:

Manfred Hackl (46) has been with Erema since 1995. He started as a quality manager and was appointed product manager for PET recycling in 1998. From 2004 to 2006 he was Vice President of the company and has been CEO at Erema since 2006

(figure: Erema)



“A higher portion of recycled material in plastic products would have enormous positive leverage on the entire plastics industry.”

Manfred Hackl

later recyclability at the time they are produced. The way forward is to organize material flows better and optimize the production of plastics in such a way that new, high-quality products with a high recycling content can be made from them. This is how sustainability works in a closed loop.

Why does this closed loop not work now and what is your vision for its realization?

Feichtinger: In order to secure the necessary material streams also for future generations the portion of recycled material in products has to increase dramatically. In terms of technology this is already possible, but the industry still has to accept the fact. The crux of the matter currently lies in a completely paradoxical view of the general public and the industry with regard to plastic: whereas plastic is regarded as a valuable raw material by the industry it often has a negative aftertaste for the general public. On the other hand, people see recycling as a positive topic, whereas the majority of the industry still refuses to use recycled pellets – although more or less everyone talks about sustainable corporate policy. I think legislation is required here to create the necessary economic and awareness-building framework conditions.

Hackl: Passing laws and directives for the collection of plastic waste for reuse is not enough; you have to stipulate defined minimum percentages of recyclates in plastic products. A higher portion of recycled material in plastic products would not only have enormous positive leverage on the entire industry, it would also be a huge improvement in terms of image. But the longer this development takes, the more difficult it will be to maintain our material flows in a sustainable way.

Who else could help to realize this vision?

Feichtinger: Pressing ahead with this development requires even more global manufacturers of branded products. They have to recognize the opportunity of initiating a positive spiral and offering products which contain recycled materials. Ikea was one of the first companies to recognize this, Coca-Cola also makes a major contribution with rPET featuring in bottles and Henkel was recently added to the list with another product containing recycled material. Far more global players, however, would have to pull together.

Hackl: These can also be smaller, regional initiatives which, as a good and successful example with a large portion of creativity, lead the way to increasing the portion of recycled material. In



“Global manufacturers of branded articles can initiate a positive spiral with products containing recycle.”

Klaus Feichtinger

About the Interviewee:

Klaus Feichtinger (54) began his career at Erema in 1993 as a management assistant. From 1999 to 2004 he was authorized signatory and has been CEO at Erema since December 2004 (figure: Erema)

Chile, for example, three young masterminds launched the initiative “Net Positiva” to free the sea from old polyamide fishing nets. Thanks to a creative idea a company was formed which now manufactures trendy skateboards from the recycled pellets from these nets.

Klaus Feichtinger: Articles in the media can likewise make such a valuable contribution. Discussions which are not always factual and balanced, like the current debate about microplastics, bisphenol A and plastic carrier bags, tend to overshadow the positive aspects of the material in the public’s eye.

Where do you see the biggest growth markets in plastics recycling?

Feichtinger: If you take a look at current legislation developments in Europe, Brazil and China – just think of the ‘Green Fence’ – which speed up the development and efficiency of collection systems, we expect recycling to become stronger in the post-consumer area and in the case of grind from the automotive and electronic sectors.

Hackl: In the field of plastic recycling systems, efficient and flexible systems in particular will prevail because the complexity in the processing of used plastics will continue to increase due to constant innovations in the production of plastics. Extensive recycling competence and experience together with a high degree of innovation are without doubt the key factors for success. Erema has been taking this approach for more than 30 years now and is, therefore, well prepared to provide the answers to the ever changing recycling challenges. ■

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