



PLASTIC PACKAGING INDUSTRY TRENDS

PolyER hosted a round-table discussion on plastic packaging.

Plastic recycling challenges

It was the first time a packaging manufacturer brought all stakeholders around the table. The attendees included feedstock suppliers, packaging manufacturers and customers, plastic collection and recycling operators. The participants unanimously agreed that the new trends entail significant costs and limitations for businesses, yet, manufacturers need to explore new horizons to fit in with the high-tech development. Shifting to a circular economy can indeed be an effective answer.



Vladimir Rush, CEO of PolyER, giving a welcome speech.

THE NEW TRENDS ENTAIL SIGNIFICANT COSTS AND LIMITATIONS FOR BUSINESSES, YET, MANUFACTURERS NEED TO EXPLORE NEW HORIZONS TO FIT IN WITH THE HIGH-TECH DEVELOPMENT.

According to Denis Penshin, Chief Expert at SIBUR's Sustainable Development, packaging companies have already confirmed their readiness to make their products more environmentally friendly. Yet, this requires a concerted effort from all market players and the removal of obstacles to recycling. "Packaging accounts for 35% to 45% of total plastic consumption. Most of the companies are set to move to 100% recyclable or reusable packaging by 2025," he said. "Plastic can be fully recyclable and is compatible with a circular economy approach. With an ever-increasing array of new plastic recycling technologies, it is essential to ensure effective interaction between market players and process chain participants, from production to processing."

Poor design hinders effective plastic recycling. Eco-friendly packaging should be fully recyclable and easy to take to pieces and should not be mixed with other materials. The quality of recycling is largely affected by polymer additives, metallisation and printed images, but these problems can be effectively solved by customers and manufacturers.



Denis Penshin (second from the left) believes a concerted effort from all market players is needed

IT IS ESSENTIAL TO ENSURE EFFECTIVE INTERACTION BETWEEN MARKET PLAYERS AND PROCESS CHAIN PARTICIPANTS, FROM PRODUCTION TO PROCESSING.

Sergei Pukhovskiy, Head of Packaging Equipment at ULMA Packaging, believes that green packaging can be seen as a synonym for sustainable development, referring to the European circular economy strategy. “Many European trends can be traced back to Great Britain, a role model for other countries in terms of green packaging. The initiatives that proved to be a success there will be embraced by European companies in just 2–3 years. In Russia, it may take 5–10 years to take these practices on board. The European strategy sets the goal of ensuring that 55% of all manufactured products are recyclable by 2030 and that beverage bottles contain at least 30% recyclable plastic.”

Another global problem that many countries are facing is the lack of waste sorting culture. Russia has a vast territory, and it has been able to do without waste sorting for quite a while. However, today, waste recycling reform should be a clear priority on the government level.

Meanwhile, steps need to be taken to introduce effective sorting and recycling technologies and encourage business to use recycled plastic. However, it is no secret that there is still some concern around polymers as their end-use properties often leave much to be desired and practical applications are limited.



Participants of the round-table discussion

ECO-FRIENDLY PACKAGING SHOULD BE FULLY RECYCLABLE AND EASY TO TAKE TO PIECES AND SHOULD NOT BE MIXED WITH OTHER MATERIALS.

Recycling technologies

[Konstantin Rzaev \(/en/14/article/focus/recycling-in-russia-what-is-coming-ahead/\)](#), Chairman of the Board of Directors at EcoTechnologies, had a chance to see with his own eyes how fast the interest in collecting waste, recycling plastic packaging and reusing polymers has grown. “For the last two decades, plastic recycling technologies have made tremendous progress. The challenge we face today is how to collect plastic. Plastic processing can be significantly improved if sorting is carried out at earlier stages. With waste sorting gaining momentum, an increasing number of business include relevant goals in their strategies and more people make sustainable lifestyle choices. According to various estimates, Russia produces 55 to 70 mt of solid municipal waste annually, with plastic accounting for only 8%. Paper and plastic are the two materials that are most often recycled and enjoy the highest demand. PET bottles and plastic packaging are at the top of the list here.”

As the cost of feedstock for recycling is rather high, most popular waste types include HDPE canisters and bottles, HDPE and PP boxes, PET bottles, big bags, plain and printed films. Polypropylene, polystyrene, PVC waste and engineering plastic are also in demand, but take more effort to select and recycle.



Konstantin Rzaev delivering a speech on recycling

THE EUROPEAN STRATEGY SETS THE GOAL OF ENSURING THAT 55% OF ALL MANUFACTURED PRODUCTS ARE RECYCLABLE BY 2030 AND THAT BEVERAGE BOTTLES CONTAIN AT LEAST 30% RECYCLABLE PLASTIC.

Since 2015, Russia has embarked on a new path to boost the industry, lifting all limitations on waste sorting. The extended producer responsibility (EPR) framework is now in place, introducing environmental charges and forcing manufacturers of packaging to finance its recycling. Today, overlooking the quality and environmental safety of products is neither economically efficient, nor socially responsible for businesses. Recent reviews and comments from consumers lead more companies to question the future of packaging.

Standard packaging utilisation rates are lower in Russia compared to those in Europe, and that is for a reason. Polymer utilisation requires collection and sorting capacities the country is lacking due to shortages in funding. However, with an ongoing discussion of waste utilisation rates and environmental charges, the industry is running the risk of getting into a vicious cycle. There is no doubt that reforms are necessary, as Russia has made only the first few steps on that journey and now faces the need to develop and agree on a full-fledged roadmap.



Round table participants during a tour around PolyER facilities

STEPS NEED TO BE TAKEN TO INTRODUCE EFFECTIVE SORTING AND RECYCLING TECHNOLOGIES AND ENCOURAGE BUSINESS TO USE RECYCLED PLASTIC.

Innovation in the era of trade-offs

In a bid to be more environmentally friendly, manufacturers still need to think about consumer properties of packaging. Indeed, it is exactly where packaging companies have to navigate various trade-offs to find a reasonable balance between sustainability, economic efficiency and customer interests.

According to Aritome Akihiro, Head of Chemicals, Forest Products and General Merchandise Department at ITOCHU Corporation, packaging should be not only environmentally safe, but also commercially reasonable, helping retailers grow their business. “Packaging plays a large role in product presentation, where the focus is now on cost efficiency, design and functionality,” he said. “We do need to offer products that look attractive and enticing, but at the same time we should take care of the environment and minimise negative impact. Japan recycles 84.8% of all plastic bottles and as little as 0.4% of containers. The main goal in the near future is to increase the share of recycled plastic trays.”



Aritome Akihiro believes that packaging should help retailers grow their businesses.

THE LESS MATERIAL IS USED TO PRODUCE PACKAGING, THE EASIER IT IS TO RECYCLE IT.

The less material is used to produce packaging, the easier it is to recycle it. The light weight of trays make them more environmentally friendly, while foaming is used to obtain the required size. Stackable trays is another beneficial solution that helps use less materials as trays stack inside each other. With lids enabling perfect sealing, there is no need to use adhesive film, which also helps decrease waste. Multilayer plastic packaging is a clear industry trend, with the upper and lower layers directly contacting with a product or consumer being manufactured from conventional feedstock and the inner layer being made of recycled polymer materials.

The future of packaging is the topic that remains high on the industry's agenda. This was again testified by the round-table discussion. The industry players need to work towards cooperation to tackle the issues of environmental safety, economic efficiency and functionality of plastic packaging solutions in the most effective way possible.