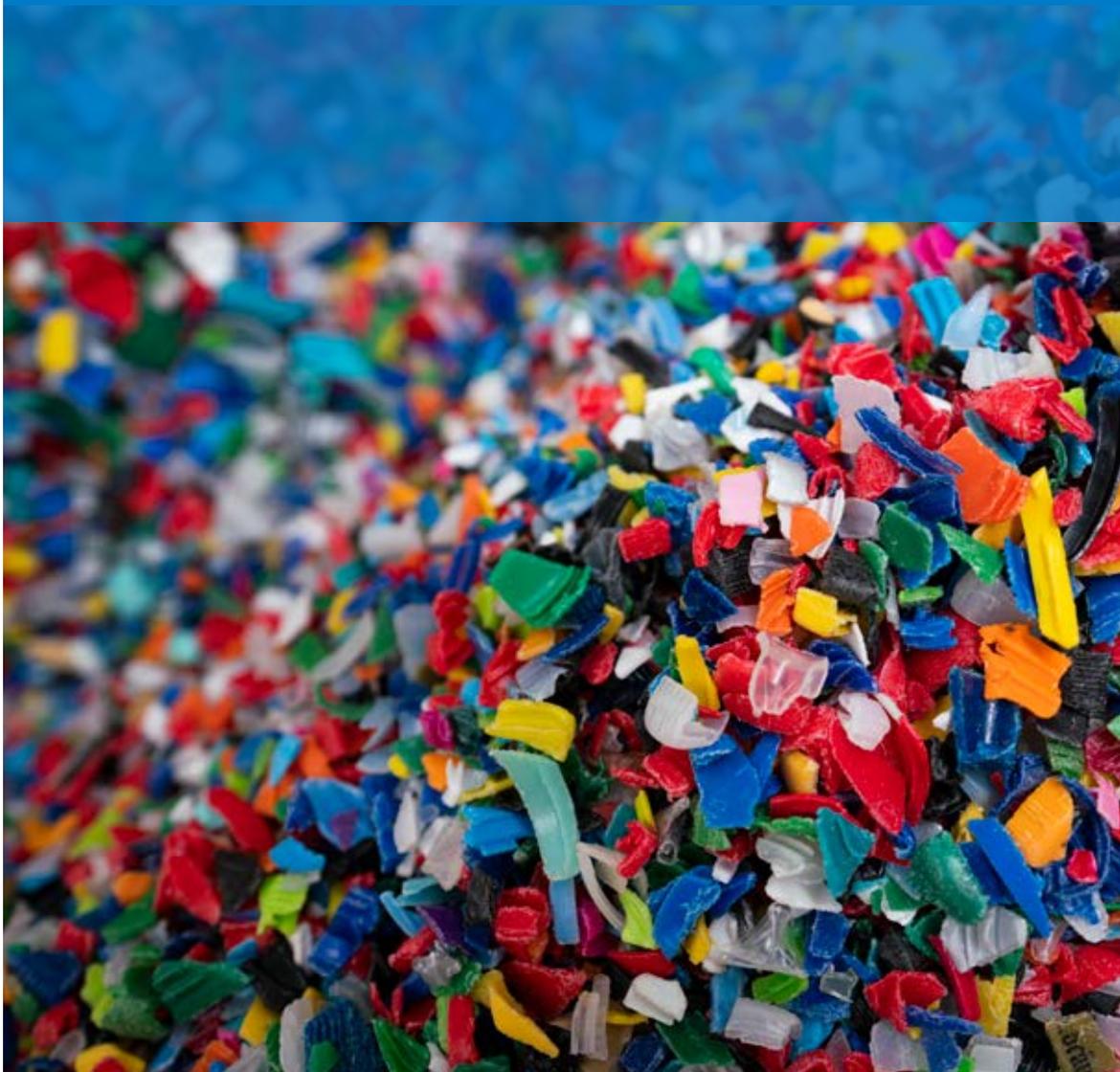


Second lives of plastic packaging: lessons learned



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A bundling of learning experiences that were acquired during the fifteen pilot projects in October 2018-November 2019 during the Plastic Packaging Waste as Raw Material (KVG) program.

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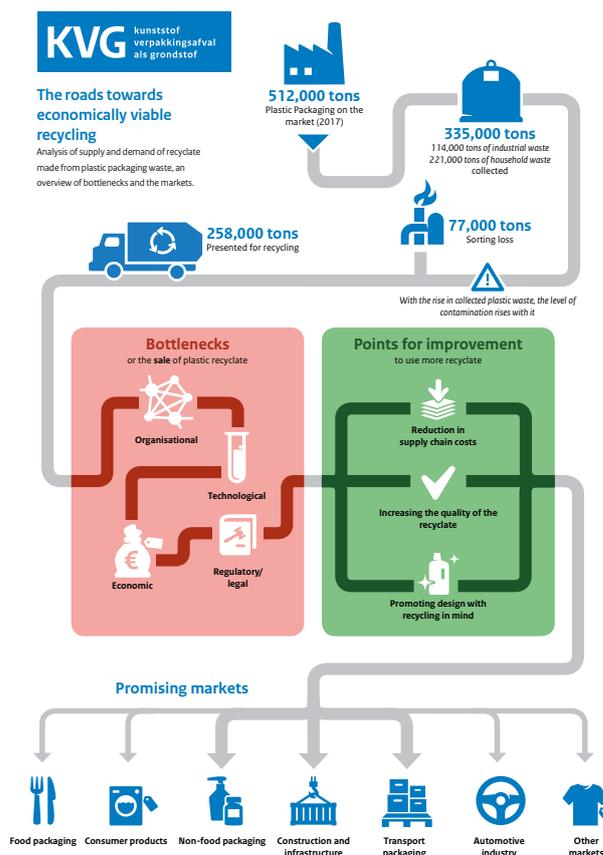
Summary

This document bundles a number of important learning experiences that were acquired during the fifteen pilot projects that are part of the Plastic Packaging Waste as Raw Material (KVG) programme. The purpose of this document is to share these lessons learned. This way, organisations that want to use recycle can learn from this and apply it in their own practice and subsequent innovation projects.

The KVG programme promotes a second life of household plastic packaging waste in products. By better matching supply and demand of recycled plastics, we will reduce the use of primary raw materials. This will bring us closer to achieving the ambition of the Transition Agenda for Plastics and the Sustainable Development Goals and thus closer to a circular economy.

Exploration demand side of plastic recycle

In the run-up to the start of the pilot projects, an exploration was conducted to gain more and better insight into the demand side of the plastic recycle market, both in terms of application possibilities and market development¹. The infographic below is a simplified presentation of the recycling chain of plastic packaging with its main bottlenecks, chances for improvement and promising markets (a thicker arrow implies very promising) for the use of recycle.



¹ Kort M., Haffmans S., (2018). Exploration of 'Plastic Packaging Waste as Raw Material' Technical and Economic Analysis. Available in Dutch on www.kunststofhergebruiken.nl.

Overview of pilot projects

The registrations were assessed by an independent selection committee to arrive at fifteen pilot projects that, with the help of a financial contribution, started to work on various aspects of the use of plastic recycle from household packaging waste. The pilot projects were carried out within a one-year period, from October 2018 until November 2019. The table below provides an overview of the pilot projects, the bottlenecks and points for improvement and the market the developed product or technology is classed under.

Organisation	Market	Bottlenecks	Points for improvement
Lobbes and Hema			
vanPlestik			
AVK Plastics B.V., Attero B.V. and Prodin B.V.			
Royal Lemkes and Van Dijk Flora			
Midwaste and Zweva Engineering			
Circulus-Berkel B.V. and Rova			
NS Stations B.V.			
VSH Fittings B.V. and Promatrix B.V.			
Veolia Polymeres NL B.V., Veolia Recycling Nederland B.V. and Aufderhaar Kunststof Recycling B.V.			
St. Vierdaagsefeesten Nijmegen			
De Groot Vroomshoop, Wavin, RPP, Veolia Polymers and Attero			
Save Plastics and Plastic Fantastic Coöperatie UA			
Searious Business			
Sustainable, Dekker Zevenhuizen B.V., SUEZ Polymers B.V., de Modulefabriek B.V. and Mapei Nederland B.V.			
Upp! UpCycling Plastic B.V.			

Common lessons

Below, we present eight learning experiences that have emerged multiple times and that may also be relevant to other pilots:

- Be prepared to invest in each other as pilot partners from the outset. Make an effort to gain insight into each other's individual and collective interests in the pilot and in the knowledge available, from the start. Visit each other for a look behind the scenes. Provided everyone is willing to put their abilities and inabilities on the table, a good basis of trust can be created for collaboration and commitment of the partners to the objectives of the pilot.
- Form a consortium representing the various links in the chain. This means sorting and/or recycling company, manufacturer of the recycled product and brand owners and/or users of the products. Pay attention not only to the links in the chain, but also to the actual people representing the parties. Assess everyone's qualities (dreamer, realist, critic) and ensure complementary expertise is present.
- Create a sense of responsibility among all chain parties. The high-quality use of recyclate can grow much further. But this growth is only possible if the entire chain is aware of the fact that this requires the use of mono-materials, with a minimum addition of colour and other additives. Every chain partner must take its responsibility in this regard.
- Prepare your internal organisation to innovate with and learn from the use of recycled plastic. Not only the chain parties need to link up, internal coordination and collaboration are required as well. Therefore, make sure you involve different departments (such as R&D, design, marketing, sales, finance, etc.) from the start of your project. Create internal support, both at management level and through ambassadors in the rest of the organisation to reduce resistance when obtaining support for innovation.
- As a purchasing party, do not consider recyclate as second-hand virgin plastic, but regard it as another material with its own identity. Recyclate can react differently in the production process and in use than virgin. The application of recyclate requires its own steps in processing in order to arrive at an end-product that meets the product specifications.
- As a purchasing party, be prepared to investigate the Statement of Requirements for the purchase of recyclate with the recycler. Conduct an investigative conversation with your internal organisation and in the chain about which purchasing requirements are really needed. What is realistic and sustainable demand if you want to put a 100% recycled product on the market? Are some requirements relevant or more of a tradition or the result of risk management? How much of a problem is it really to use a plastic bag that packs compost or a bottle of detergent if it has some odour of its own? If the properties of virgin material are used as a benchmark, the 'purchasing range' remains limited and with that the possibilities for using recyclate.
- Clearly highlight the advantage that an innovation with recyclate offers, in the market that you enter. Recyclate is a raw material with a history. You can see this as a deterrent, but it can also make recyclate something interesting, fun or contemporary in the eyes of the customer or consumer. In addition, show the positive impact of recyclate in figures. Research shows that this motivates many people to change their behaviour. To ensure a successful market introduction, telling the story behind your recycled product and the fun factor for the use of recyclate are important.

- Start with sustainable innovation and learn as you develop! Innovating and learning lead to further innovation: once you start a pilot project and have taken on a learning attitude, your sustainable ambition continues to grow and you will develop a consortium that is willing to take greater risks compared to when you focus on performance alone.

After reading these learning experiences, have you grown curious about the stories from the pilots behind them? Or do you want to get started with using household plastic packaging waste in new products? If so, this bundle will be a useful reference work with learning experiences for pilot projects, per development phase. You can find all the end results of the programme at www.kunststofhergebruiken.nl (in Dutch).