Printed packaging
Focusing on design and recycling processes

The transformation to a circular economy does not stop at packaging: the requirements of the revised EU Packaging and Packaging Waste Regulation (PPWR), which became effective on February 11, 2025, will steadily increase the importance of recyclable packaging. While the recycling rate for paper and cardboard packaging in the European Union is around 80%, it is currently just over 40% for plastics. In order for the transformation to a circular economy to work in this area, the design aspects and recycling processes must be further optimized. Deinking should play a significant role for printed plastic packaging in the future.

Packaging in the recycling process

In order to ensure a functioning circular economy in line with the ambitious goals of the Green Deal and the PPWR, it is important that the packaging materials (paper, plastic, etc.) can be efficiently recycled. For printing, this means that it must not impair the recyclability of the packaging material.

A holistic approach to the circular economy

The “design for recycling” of packaging, including printing inks, plays a major role in this process. The printing ink industry is very aware of its responsibility and is willing to make its contribution. However, it is in the nature of the circular economy that all players involved must work together and do their part to improve the recycling rate. This applies not only to the design phase, but also to the optimization of recycling processes and efficient collection and sorting. In particular, the interplay between printing and the actual recycling process must be approached holistically.

Establishing deinking for plastic packaging

In order to obtain high-quality recyclates, it is important to remove the ink using a deinking process before recycling. Such deinking processes are already established in the recycling of graphic paper and meet the technical standard there. They must now also be established in the field of plastics recycling in order to achieve ambitious recycling targets.

Trials on a laboratory scale and in test plants as well as initial industrial processes based on water-based washing solutions have demonstrated their effectiveness in deinking a wide range of printing inks and coating categories. It has even been possible to produce completely transparent recyclates by removing the pigments, which increases the value of the recyclates. This represents an important milestone on the way to a functional circular economy.

What we advocate for

Approaching the circular economy holistically – utilizing all parameters

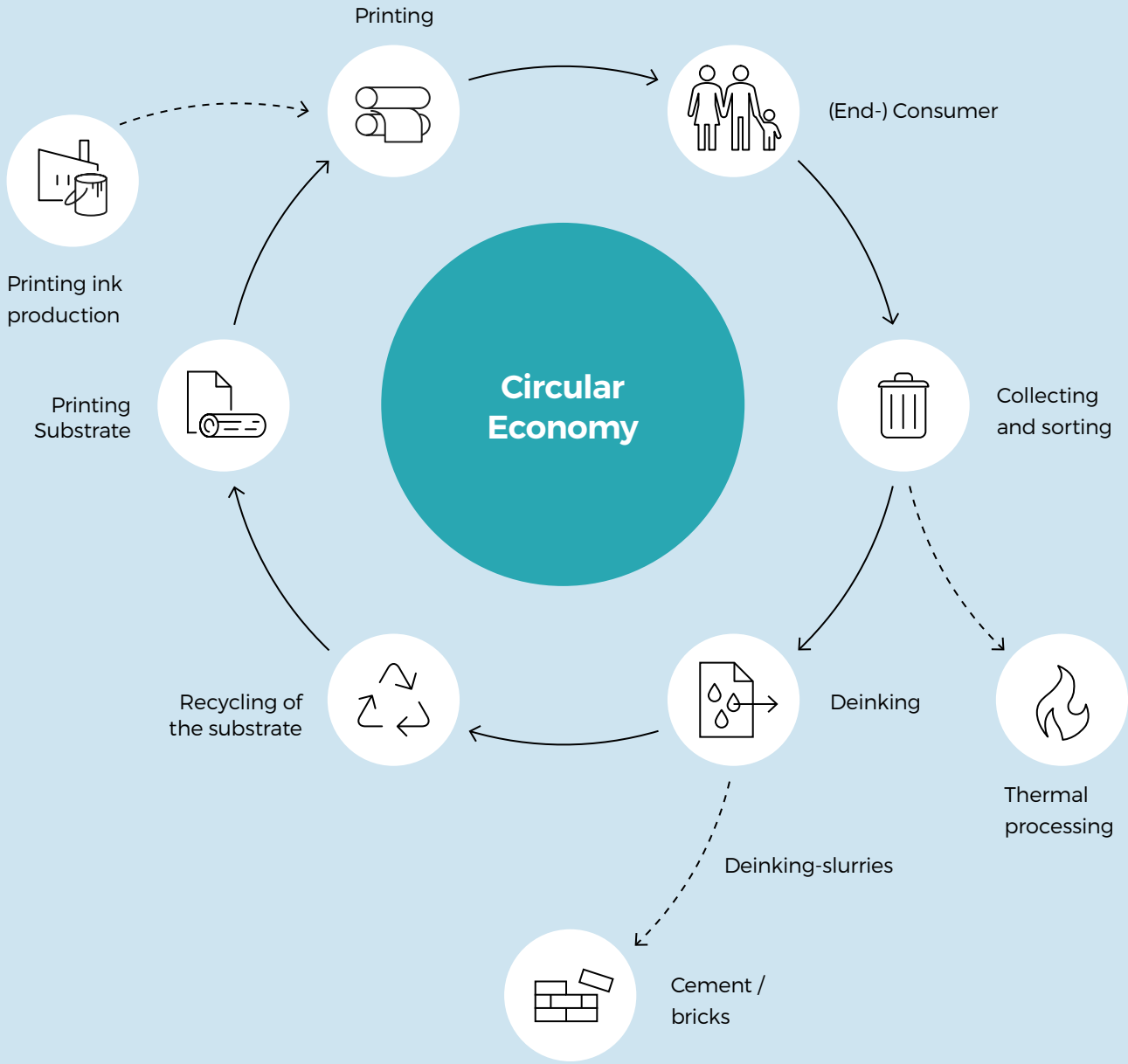
The circular economy is based on examining the entire product life cycle and ensuring that all stakeholders play their part. This is the only way to use all the available levers and optimize the result. This applies to the design phase, but also to the optimization of recycling processes and the efficient collection and sorting.

Establishing deinking for plastic packaging

In order to increase the circularity of printed packaging, it is important to remove the ink using a so-called deinking process before recycling. The widespread implementation of deinking steps in the recycling of printed plastic packaging is crucial in order to achieve the ambitious recycling targets. Deinking is an important pillar on the way to a functioning circular economy.

Printing inks in the circular economy

To ensure that the printed packaging material can be efficiently recycled, the right recycling technologies, in particular the deinking step, are crucial alongside the recycling-friendly design of packaging and printing ink.



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