

## Malengé Packaging produces flexible packaging that meets the recyclability requirements that now apply in the agri-food industry

Dry foods can now be protected from light, oxygen and humidity by a really light and totally recyclable paper container made from virgin fibres, developed in partnership with CTP (Carnot PolyNat).

### Supporting Innovation

Packaging has been identified as a major cause of pollution due to the difficulties inherent in sorting and recycling a complex product made from materials with very different life cycles. Under French EPR regulations, producers must design their packaging in a way that reduces its impact on the environment once it is processed as waste. Malengé Packaging's commercial offering is made from a mono-material paper base with barrier properties conferred by functional printing processes. Optimal sealing and surface treatment properties reduce its weight by between 15% to 40% of equivalent-type packaging with a plastic or aluminium layer. The result is a container that is compatible with the paper recycling chain while affording excellent protection to products. Overall, the carbon footprint can be up to 60% smaller than existing solutions on the market.



Cycle Pack ©Malengé Packaging

### The client needs

Malengé Packaging is a one hundred-year-old company based in the Hauts de France region of Northern France and specialising in offset printing. Since 2000, it has been harnessing its expertise to the emerging flexible packaging market, where it has become a reference, particularly for organic products, coffee and seeds. The company has invested in the search for a solution that would enable manufacturers to comply with their environmental commitments in terms of packaging. Malengé wishes to develop a flexible packaging offering that uses processes and materials from the paper industry. It is based on 100% recyclable barrier paper whose components must all be optimized to meet the imperatives of cutting down on both materials and weight. It was as part of a joint research lab (ANR-LAB3P), bringing together Malengé Packaging and the Pulp and Paper Research and Technical Centre (CTP), that these two long-standing partners made this project a reality by developing the Cycle Pack range, based around a material recognised as being recyclable by CEREC (French committee for evaluating the recyclability of paper-cardboard packaging). ANR-LAB3P was set up in 2016 and by 2018 it had already come up with a commercial product that met the requirements of a first customer. Cycle Pack is fully adapted to collection and recycling channels and it earned Malengé the Grand Prix Innovation prize at the Citeo Circular Challenge.

### Partnership

PolyNat Carnot Institute seeks to create new bio-based materials and functional systems. As part of this research, CTP explores all of the innovation possibilities linked to the sustainable use of paper resources. It focuses on replacing multi-material solutions that use aluminium and polyethylene and are responsible for a major portion of materials wasted. CTP's contribution was decisive for selecting ecological barrier components and for using functional printing, which provides the barrier properties by depositing optimal quantities only in the areas concerned. Its expertise in this domain initially made it possible to come up with a light, printable and heat-sealable paper, compatible with standard machines, and 100% recyclable. It was first used to store a powder flan, thoroughly insulated from light, water vapour and grease. The partnership is continuing apace and all of Malengé's teams are on board. The company will be able to expand its product range and the range of barrier properties it can offer its customers. Thanks to increasing demand, Malengé is already adding production capacity and expanding its workforce.