

## TRANSPERBAR

Improving the preservation properties of transparent flexible food packaging using a new technique of light-transparent and gas-impermeable coating.



# PROJECT

### Inspiration

You've almost certainly seen pasta, orange juice, or even sweets wrapped in transparent plastic in shops and supermarkets. Perhaps you even think that this packaging is more eye-catching than the same products wrapped in opaque packaging, or it has reassured you about its contents? It appears that consumers are more likely to buy when they can see exactly what they are buying. Manufacturers must adapt to this trend and transparent flexible packaging naturally comes to mind.

However, transparent packaging cannot be used for all products at present. It has many restrictions, particularly in terms of additional manufacturing costs, or in terms of properties affecting the shelf life of food, or even causing food to deteriorate. Moisture and oxygen, among other factors, are real enemies for the storage of products in transparent, flexible packaging.

### Innovation

With TRANSPERBAR, the project partners intend to improve the coating of gas-impermeable transparent flexible coating which is currently the weakest point of transparent packaging. They will also target to develop new transparent packaging solutions restricting the penetration of moisture and oxygen as much as possible.

To achieve this, they are working on a gas-impermeable barrier layer, combining transparency in the visible range and flexibility, on polymer sheets. Their goal is that the developed coating will give these sheets, which are the basis of traditional transparent packaging, the same preservation features as aluminium packaging.

For this type of coating, LIST researchers have been able, in other research projects, to identify solutions and develop low-temperature coating techniques that are compatible with the polymer films. TRANSPERBAR will thus benefit from their experience and knowledge in terms of design and low-temperature thin coating.

### Impact

The optical transparency of coatings obtained at the end of the project will bring added value and competitive advantages for future products offered by the MET-LUX company which will then be able to expand its range of products offered on the market.

More broadly, transparent conductive barriers that will be considered and tested during the project will pave the way for new applications, mainly for flexible electronics, a field in which MET-LUX wants to become a leader within the next decade.

### Partners

MET-LUX (LU)

### Financial Support

Fonds National de la Recherche

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