

# INNOVATION FUND

Deployment of net-zero and innovative technologies

## 3D Fibre: Functional, safe, and sustainable 3D wood fibre-based packaging innovation to replace plastics in food and food service packaging

The Innovation Fund is 100% funded by the EU Emissions Trading System

### | Project Factsheet

The project introduces an innovative and sustainable packaging solution that replaces traditional fossil-based plastic packages. The project will build a first-of-a-kind production plant that, at full scale, will have an estimated production capacity of over 1 billion packaging per annum. This plant will be an important industrial milestone, implementing the next-generation 3D Fibre technology that converts wood fibres into safe packaging while saving raw material, energy, and water. The new production process and packaging solution is expected to result in a 110% relative greenhouse gas (GHG) emission avoidance compared to fossil-based plastic packaging solutions.

The innovativeness of the project is two-fold: It introduces a novel modular, highly automated production system, and its packaging solutions are closer to plastic alternatives than state-of-the-art products. 3D Fibre packaging solutions are light yet very rigid, thanks to their unique multi-layer structure. The wood fibre raw materials and 3D Fibre packaging solutions are produced using only renewable energy.

#### COORDINATOR

METSALIITTO OSUUSKUNTA

#### LOCATION

Finland

#### CATEGORY

Energy intensive industries (EII)

#### SECTOR

Chemicals

#### AMOUNT OF INNOVATION FUND GRANT

EUR 86,500,000

#### EXPECTED GHG EMISSIONS AVOIDANCE

4,188,427 tonnes CO<sub>2</sub> equivalent

#### STARTING DATE

01 January, 2025

#### ENTRY INTO OPERATION DATE

31 December, 2030

#### FINANCIAL CLOSE DATE

31 October, 2025

*\* Calculated vs. the 2021-2025 ETS benchmark of 6.84 tCO<sub>2</sub>e/tH<sub>2</sub>, not taking into account additional carbon abatement due to substitution effects in the H<sub>2</sub> end use application, i.e. conservative estimate.*

The project is estimated to contribute to an absolute GHG emission avoidance of nearly 4.2 million tonnes of CO<sub>2</sub>e during its first ten years of operation.

3D Fibre packaging solutions will play an integral part in strengthening Europe's strategic autonomy in sustainable packaging technologies. It will contribute to reducing Europe's GHG emissions and its dependence on imported crude oil in the packaging sector. Most importantly, this project is a significant step forward for boosting Europe's circular economy ambitions, as well as tackling the challenges related to packaging waste.

The new production plant in Rauma, Finland, is expected to create 200 new jobs with an additional 200 indirect jobs. Moreover, during the construction phase, the total employment impact is estimated to be around 1 000 full time equivalent. The replicability potential of the 3D Fibre technology is very high, and the proposed solution can be adapted to use different bio-based raw materials. Flexible moulding technology will enable the production of many shapes in the future.

## | Participants

**METSA SPRING OY**

Finland

**METSALIITTO OSUUSKUNTA**

Finland