Multilayer Biomaterial Processing to produce high value-added active cellulose packaging solution.

**Context**

European directive on single use plastics

New legislations pushing the transformation of the packaging industry:
- New required sustainable solutions.
- Recyclable packaging.

Cellulosic Materials
- Bio-based and Biodegradable.
- Most abundant material on earth.
- Most recycled material in Europe.

Chaire Cellulose Valley

An organisation working to:
- Upgrade cellulosic materials.
- Propose new innovative and high performance solutions.

**Objectives**

Create a multilayer structure for active packaging.

- Extend shelf life product’s.
- Ensure barrier properties during storage.

**Methods**

**Cellulosic materials**

- Cardboard
- Foams
- New cellulose forms

**Processing**

- Preparation of active layers
- Foaming processes
- Spray coating

**Manufacturing processes**

- New assembly cardboard process
- New 3D thermoforming

Three different main targeted properties:
- Antimicrobial and antioxidation protection.
- Moisture protection.
- Barrier shift.