

Barrier corrugated cardboard 3D tray packaging using bioadhesives and ultrasound welding

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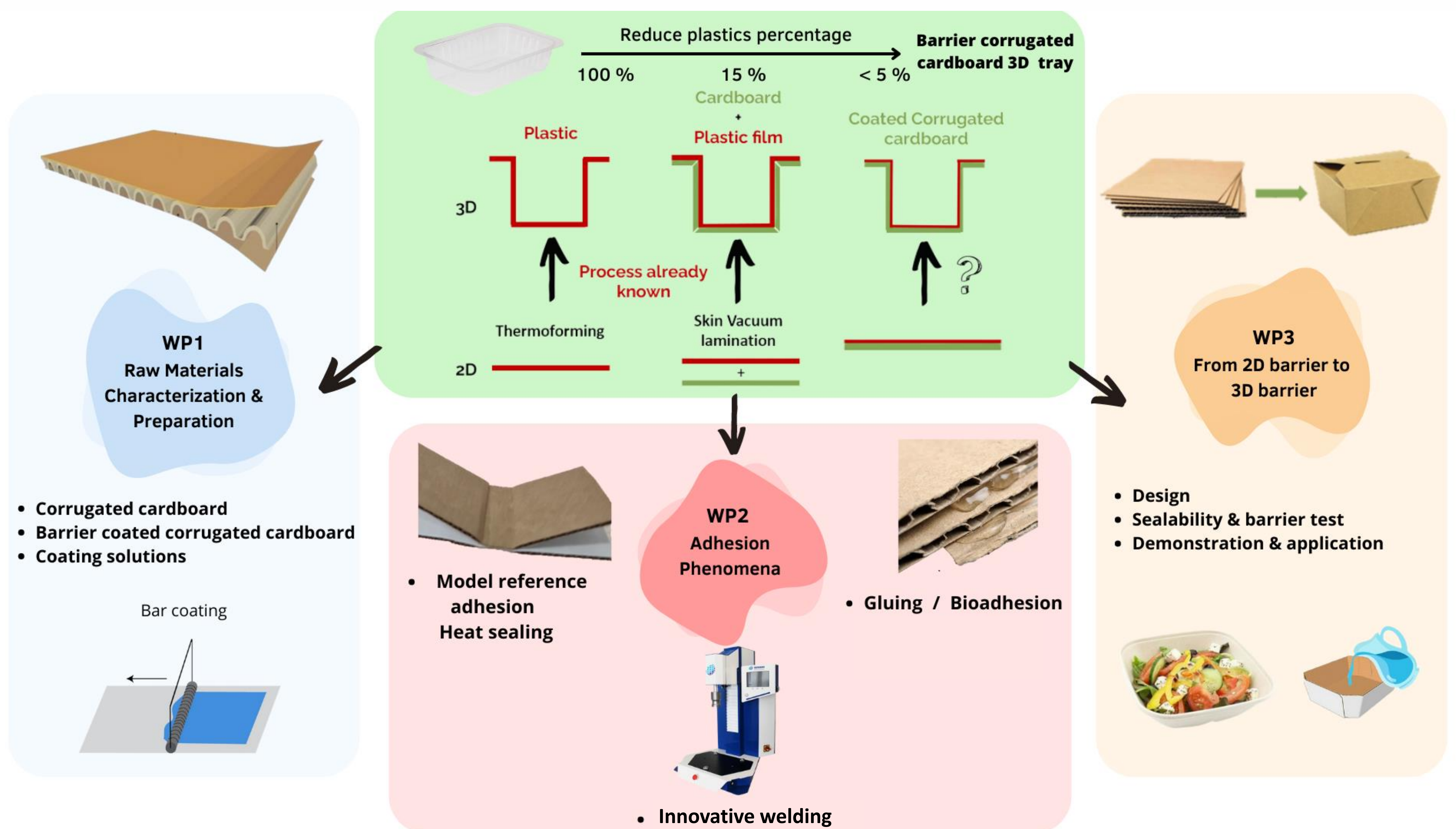
Cellulose Valley

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Context

To provide food packaging plastic trays made by thermoforming have been widely used, but with current legislations on **Single Use Plastic (SUP directive)** and **anti-waste law (AGEC)**, alternative solution need to be found. Cellulose based packages are a solution and new materials such as **barrier coated corrugated cardboard** could be used. However, the process to make the tray from this new material is not established and **innovative welding or bioadhesives** are solutions that we have investigated.



Demonstrator only 1,5% of plastic

• With bioadhesives

• Innovative Welding



Recyclable with paper Food contact Good barrier properties

Conclusion and perspectives

Main results :

- Adhesiveness level of industrial glues reached with bioadhesives
- Equivalent adhesion level reached with innovative welding and Heat sealing
- Innovative welding reduce welding time and electric consumption
- Design of a 3D barrier coated corrugated cardboard tray

Perspectives :

- Welding test with other coating solution
- Application tests with water, oil and food