Advancing recycling of multilayer plastics and textiles using an integrated approach for debonding on demand technology

DEBOND

AIM OF THE PROJECT & SOLUTION APPROACH

The project goal of DEBOND is to achieve simple, safe, clean separation between different materials in packaging and the textile products using smart (programmable) materials (e.g. thin coatings, modified adhesives, modified polymers) that debond on demand. Thereby, the debonding process should be improved by applying new product designs and new debonding strategies whilst maintaining functionality. Finally, it will be investigated how the reprocessing of the debonded materials can be improved to compensate shortcomings in the separation process (Fig. 1).

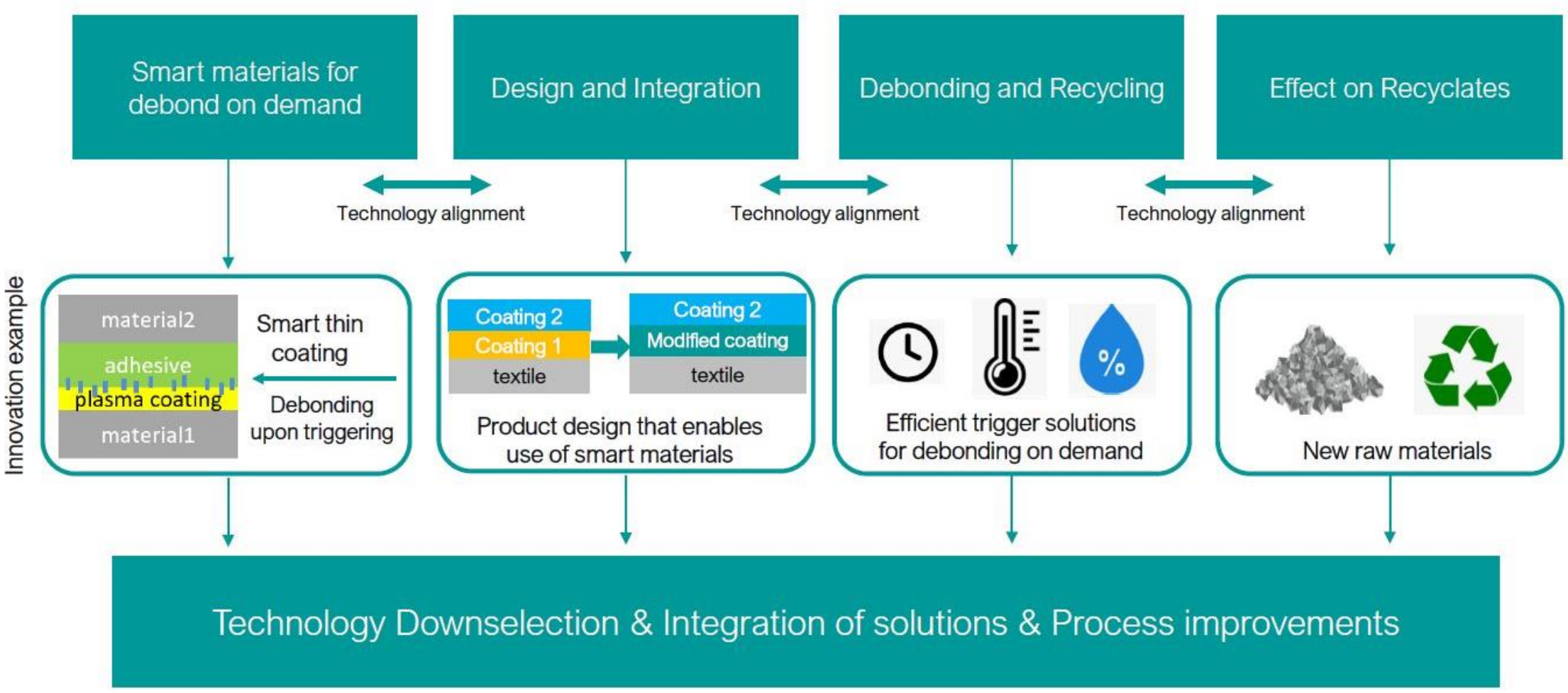

Figure 1: *An integrated approach for Debonding on Demand*

PROJECT PARTNERS & THEIR TASKS

FILK Freiberg Institute
Freiberg

Industry association
Surface technology & surface pretreatment

CENTEXBEL VKC
Grâce-hollogne

Textile manufacturing
Polymer processing for textiles

Fraunhofer IVV
Freising

Packaging design
Production technologies for film packaging

GHENT UNIVERSITY
Gent

Recycling technologies
Separation processes

Fraunhofer IFAM
Bremen

Adhesive technology
Debonding on demand solutions

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AGENTSCHAP INNOVEREN & ONDERNEMEN
Vlaanderen is ondernemen

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