

4evergreen

FFI Conference

Ralf Mack, Treasurer,
4evergreen alliance





4evergreen

brings together companies across the fibre-based packaging value chain who are committed to raising circularity and sustainability



PART 1

who we are

where we come from



Today, 81,6% of paper and board packaging is recycled.* As we discussed how our sector could become more circular, it became clear that **finding innovative and practical solutions is best done together.**



In 2019, many companies in the packaging value chain contacted Cepi to discuss and **understand the implications of the Single Use Plastics Directive.**



After several successful workshops organised by Cepi, it became evident that there was a need to create **a platform to continue collaborating.**

* Source: Eurostat, 2020

aim, goal and approach



Our aim is to contribute to a climate neutral and sustainable society by **perfecting the circularity** of fibre-based packaging.



Our goal is **to raise the overall recycling rate of fibre-based packaging to 90% by 2030.**

We will focus on the types with a low performance today, in particular household and on-the-go food packaging.



Our approach is **holistic** in identifying and promoting **innovative solutions towards climate neutrality.**

value chain

Our alliance brings together more than 100 industry leaders across the whole fibre-based packaging value chain.

Together, we can adopt a holistic approach and look at the full life cycle of fibre-based packaging.



who we represent





achievements

This is what we have achieved so far:

expertise

108

industry sponsors

14

elected steering group members

365



packaging engineers & circularity experts in workstreams

577



representatives engaged

action

5

active workstreams

4



intermediary targets

3



SMITHERS

McKinsey & Company

landmark reports



+80



tests performed

3



deliverables

communication

in 2022

9

interviews



143

engaged journalists

4

releases



781

media mentions



6

videos



3935

followers



668

followers

1 goal

raising the overall recycling rate of fibre-based packaging to

90% by 2030



political support

Virginijus Sinkevičius

European Commissioner for the Environment



“It's a pleasure to welcome the commitment of the paper industry to act together towards an ambitious goal, 4evergreen. This alliance is clearly in step with our thinking and with our objectives for a circular, low-carbon future. A future where sustainability goes hand in hand with innovation and creates exciting business opportunities.

That's the future the Commission laid out in the European Green Deal.”



Mattia Pellegrini

Head of Unit - Directorate General for the Environment – European Commission

Congratulations on having set up this alliance, bringing together key industry players in the fibre-based packaging sector. It's extremely useful for the European Commission to receive input from industry stakeholders across the whole value chain

Tomasz Chruszczow

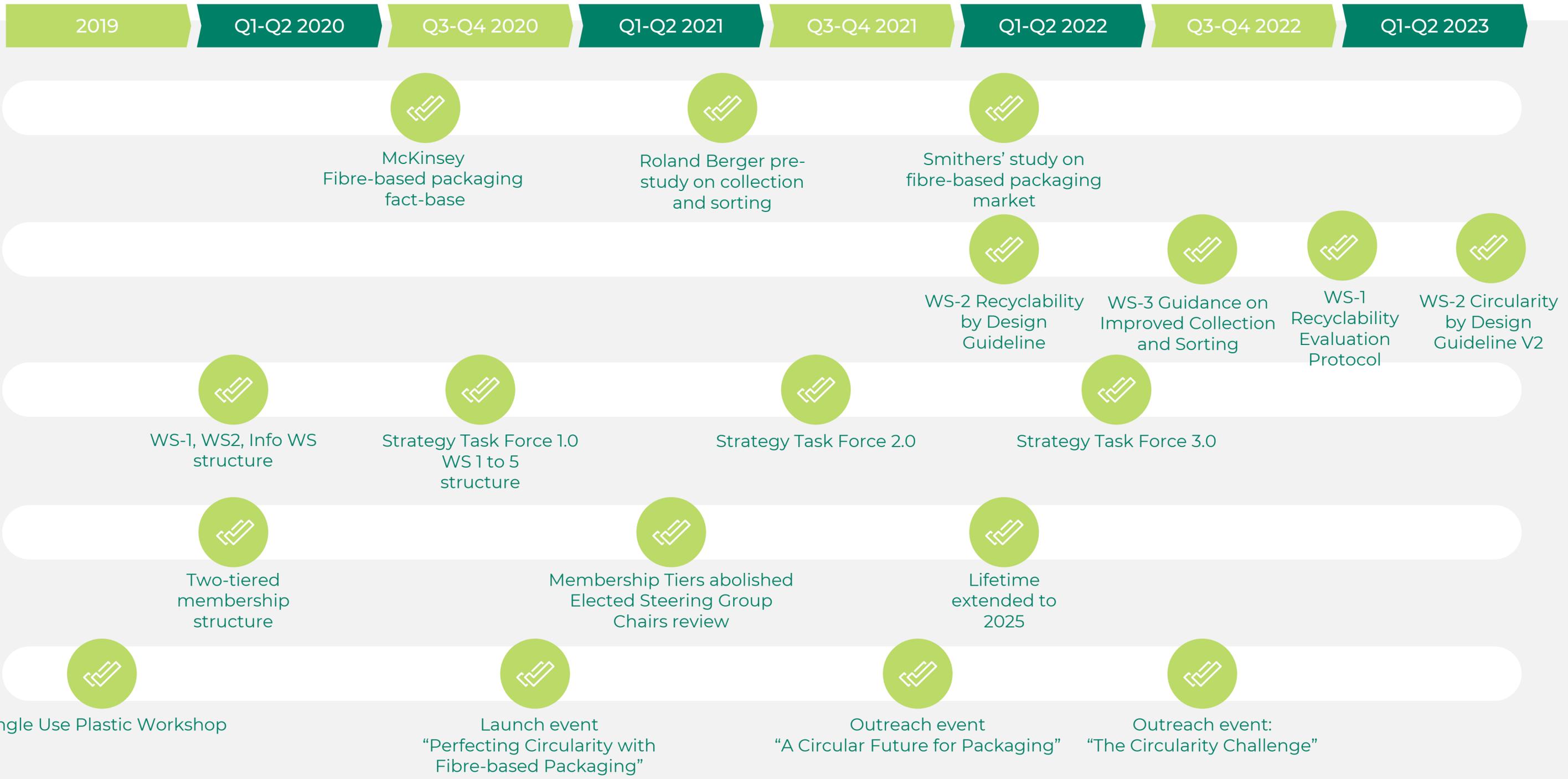
UN Climate Champion



Packaging is an important component of the transition needed to address the challenges our world is facing. The private sector is taking action, developing real and innovative solutions, thus helping the institutions and public opinion understand how their decisions translate into concrete actions.

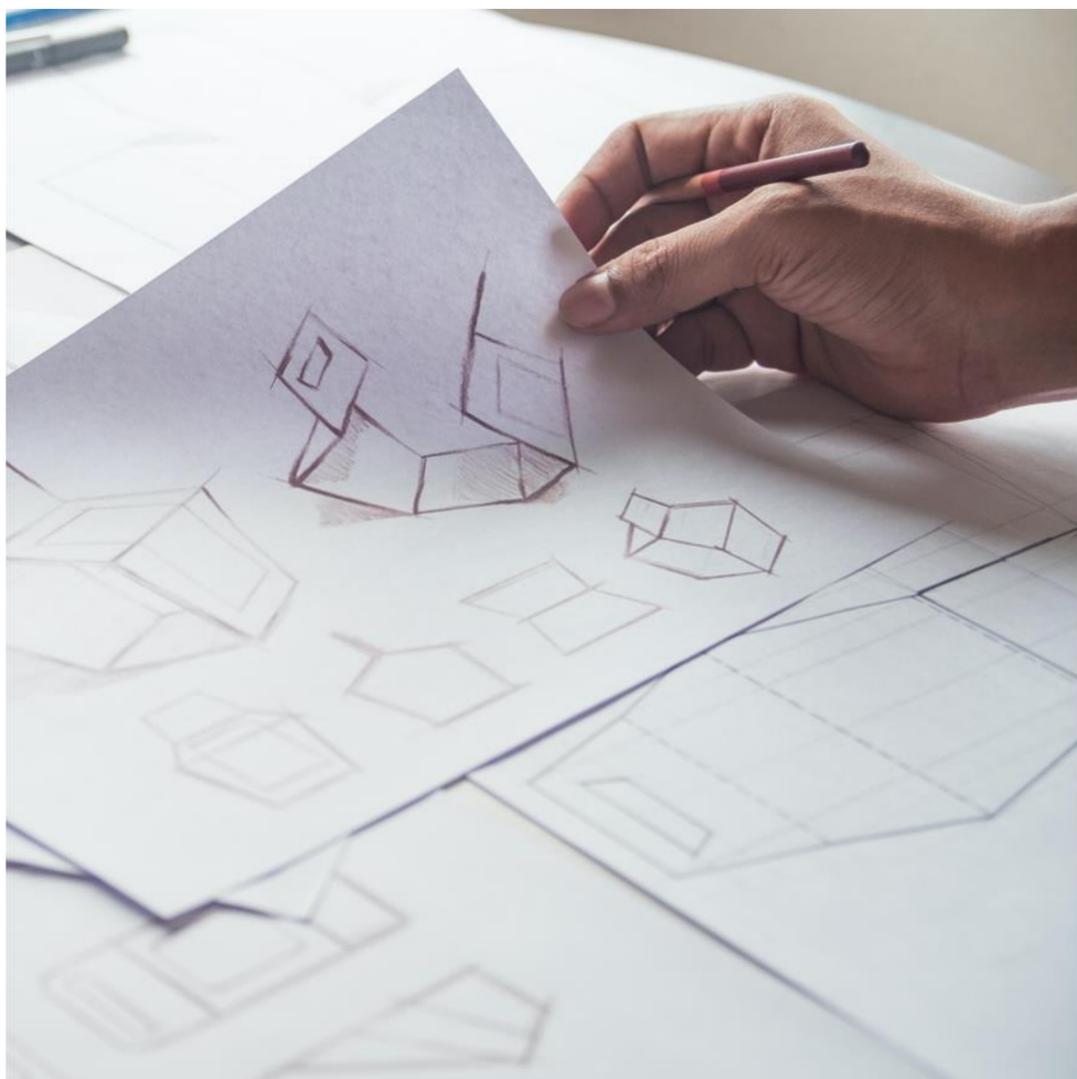
Initiatives like 4evergreen perfectly fit this ideal, and the success of your alliance will greatly contribute to the so much-needed general success on our path to climate neutrality”

4EG – timeline



PART 2

What we do



how we make a difference (1/2)

PERFECTING CIRCULARITY TOGETHER



SPREADING THE WORD



WS-5

Translating the work of the technical workstreams into digestible and educational messages for industry & policymakers.

Building consistent views and collaboration, enabling efficient & effective engagement with decision-makers and stakeholders.

Involving the customer (usage) and inform on how to dispose of their consumed fibre-based packaging product.

our industry toolbox: expert-led and fit-for-purpose



Holistic

4evergreen covers the entire life-cycle of fibre-based packaging and adopts a 360-degree holistic approach.

Our deliverables are the result of an extraordinary **collaborative effort** and **consensus-building process** of our experts.



Science-Based

Our work is based on **scientific facts** and **data** derived from **accurate testing**.

We are working with the best consulting firms and research institutes to draw from the best practices across the world.



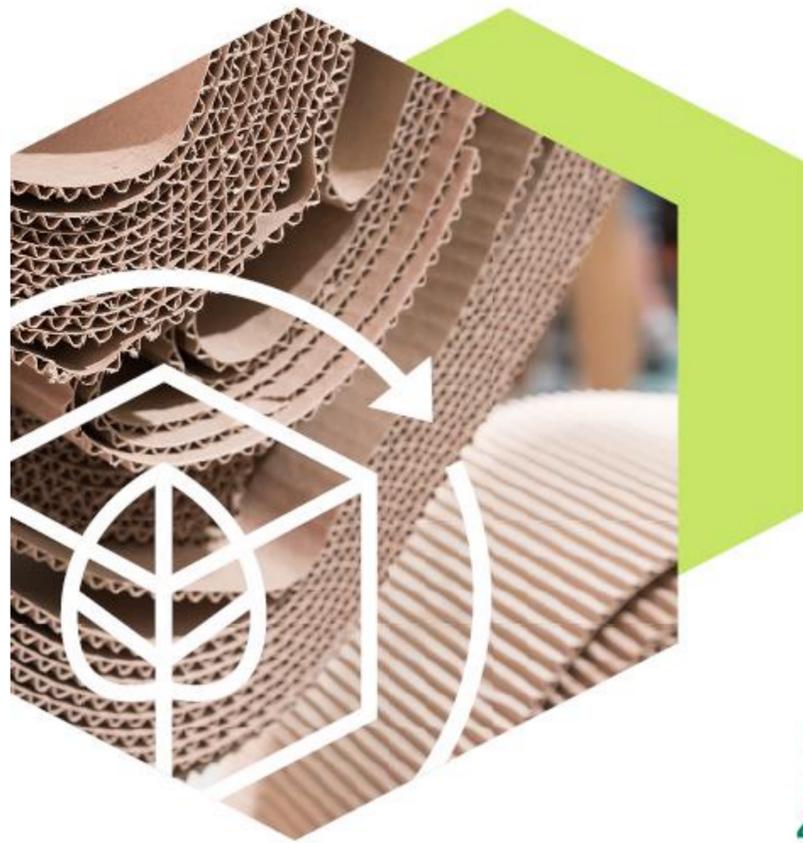
Comprehensive

Our toolbox targets the whole packaging life cycle from design to collection & sorting to recycling.

Once completed, it will tackle almost all types of fibre-based packaging

FIBRE-BASED PACKAGING RECYCLABILITY EVALUATION PROTOCOL

BETA VERSION
DECEMBER 2022



Workstream 1

Recyclability Evaluation Protocol



Why do we need a European recyclability evaluation protocol?



There is a strong focus from European institutions on circular economy, and recycling is the perfect embodiment of circularity.

However, circularity is not infinite and therefore, it is reliant on new fibres entering the loop.



The amount and variety of fibre-based packaging on the market are continuously growing and becoming more complex.

Adaptations in the recycling processes may be needed to increase the rate of material recovery.



The industry is constantly innovating to increase the recycling rate of fibre-based packaging, but they lack **a harmonised, objective method to assess and compare different packaging solutions' suitability for efficient recycling.**

what is the Recyclability Evaluation Protocol

part 1 - Beta Release

 A tool that helps to assess the recyclability of individual packaging and/or materials **in standard recycling mill**. It uses the Capi recyclability laboratory test method

 Released in December 2022, after two years of intense expert-led research and discussions

 Based on expert opinion and consensus-building. **75 experts** from **across the entire value chain** collaborated on the project

 Utilises a **vast amount of data** that incorporates results from more than 50 actual **recycling tests** involving close to **100 different samples**.

 Data was reprocessed and calibrated to create the most up-to-date scoring for the recyclability of fibre-based packaging in standard mills.

next steps and consultation process

1

Stakeholders are invited to test the protocol and send their feedback by the 30th of June 2023.

2

Feedback will be collected and evaluated by the workstream experts and incorporated into an updated version of the Protocol, part one.

3

Upcoming versions are already in the making and will include the assessment of recyclability in **floatation-deinking and specialised mills.**

The release is expected in the course of 2023.

CIRCULARITY BY DESIGN GUIDELINE FOR FIBRE-BASED PACKAGING



Workstream 2

Circularity by Design Guideline

why do we need the Circularity by Design Guideline?



Design is the first step in creating packaging and the beginning of the whole fibre-based packaging life-cycle. But it's also our first opportunity to boost circularity.



We are focused on **saving resources** and ensuring that the highest volume of material will be kept in the loop **for us to reach our target of a 90% recycling rate.**



We aim at bringing confidence to designers to create packaging that is designed for circularity across Europe and the world.

what is the Circularity by Design Guideline



This document is the first in a three-part series and explains how different components of fibre-based packaging impact the paper recycling process **in standard recycling mills.**



Released in March 2022, after months of intense expert-led research and discussions



Developed and based on the knowledge and expertise of our members active in the design of fibre-based packaging and reviewed by 114 industry leaders from across the entire value chain.



It provides **specific design recommendations for single product groups**, which serve as guidance for choosing suitable materials and processes and assure the quality of the recycled fibre.

Recommendations are presented in compact design tables, for specific materials and components

next steps and consultation process

1

Stakeholders were invited to send their feedback before the official release of the Guideline.

Comments have been collected and addressed by the 4evergreen experts and will be incorporated in the new version.

2

A **new version** of the Guideline will be released on the **19th of June 2023 and will provide guidance on design choices for used beverage cartons (UBC)** and packaging of similar composition that require recycling in specialised mills.

3

In the upcoming months, the experts will incorporate new materials and processes. The final version of the guideline will include recommendations, focused on deinking mills and specialised mills for fibre-based composite packaging (FBCP).

GUIDANCE ON THE IMPROVED COLLECTION AND SORTING OF FIBRE-BASED PACKAGING FOR RECYCLING

August 2022



Workstream 3

Guidance on the Improved Collection and Sorting



why do we need the Guidance?



In the transition to a circular economy, we need to keep materials in use and in the loop for longer. **Collection and Sorting** are key to improving the recycling rate of fibre-based packaging.



Collection systems vary across Europe and should allow **volume and quality**.

We need **simplified messages** for consumers and **uniformity** at the national level first and at the European one in a second stage.



We need high-quality standards for the **separation of waste** in the collection phase.

Quality requirement for recycling mills is incredibly important to **ensure stream purity**.

what is the Guidance on Improved Collection and Sorting



A state of the art **review of the collection and sorting systems across Europe**



Released in September 2022, after two years of work, combining the expertise of 24 individuals and validated by a further 75 industry representatives from 50 companies



Provides **best practices** to guide the implementation of the future collection, sorting and recycling infrastructure in order to meet EU legal requirements and realise 4evergreen's ambitious targets, including a 90% recycling rate for fibre-based packaging.



It **focuses on household collection** and recommends collection and sorting in **2 co-existing streams** for paper & board (PB) and lightweight packaging (LWP)



Workstream 4

Innovation

our innovation projects



Project 1

Novel sorting technologies

- Test the **efficiency of sorting technologies**
- Identify new solutions to sort difficult-to-recycle barrier fibre-based packaging and provide insights for **future industrial implementation** to raise the purity and yield of sorted fractions



Project 2

Novel Recycling Technologies

- Identify the best available **recycling technologies** to enable composite fibre-based packaging to meet the conditions of recyclability at scale.
- **Test innovative recycling technologies**, essential to minimise and valorise rejects allowing greater fibre circulation



Project 3

Comparative recyclability impacts

- **Understand the compatibility of materials with different recycling mills** and potential improvements needed.
- Lab-scale testing for fibre yield and barrier localisation (including RPM) for difficult-to-recycle barrier fibre-based packaging.

latest achievements



Project 1

Novel sorting technologies

- Ca 50 baseline tests
- 4 subselected novel technologies for future testing being organised



Project 2

Novel Recycling Technologies

- 5 technology providers for recyclability
- More than 10 different packaging materials with 3 different technologies tested.

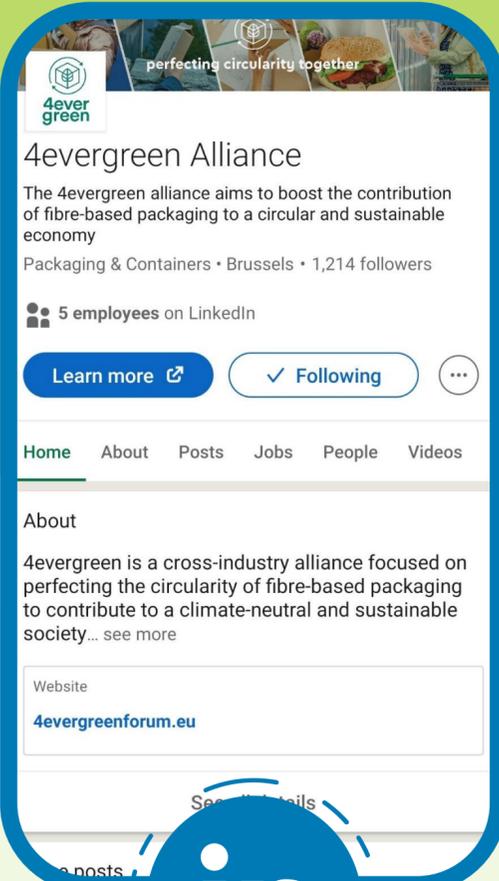


Project 3

Comparative recyclability impacts

- 7 tailor made samples produced + 2 substrates
- 16 recyclability tests
- Ongoing Residual Polymer Microparticles (RPM) tests supporting new method development

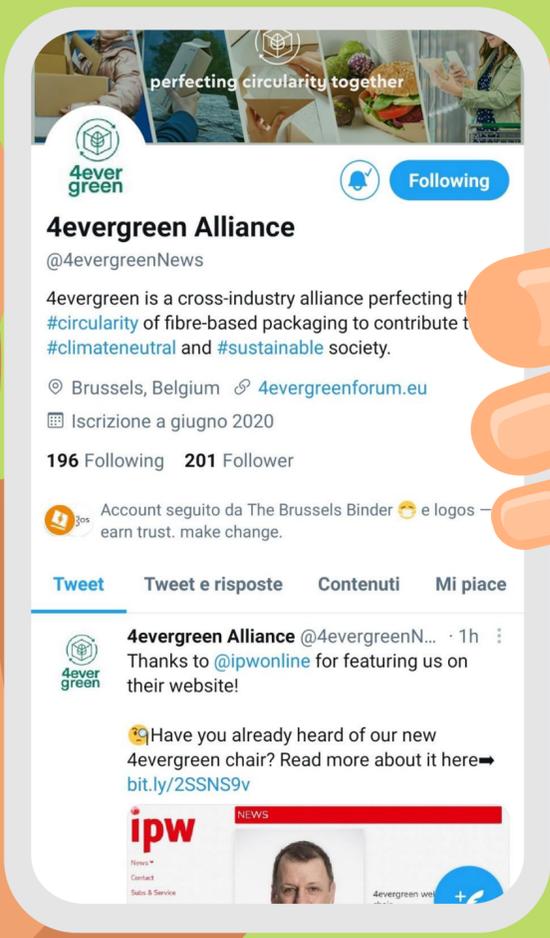
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4evergreen alliance



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Thank you!

Connect with us

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