EUROPEAN CARTON MAKERS ASSOCIATION

ECMA WEBINAR

SUSTAINABILITY UNBOXED

8 June 2020

11.00 – 11.45 CEST

Agenda

1. Welcome and Introduction
2. ECMA Antitrust Guidelines
3. Three Speakers on Sustainability

Your Moderator:
Mike Turner
ECMA Managing Director

Some useful tips before we start:

- You have a control panel at the bottom of your Zoom screen.
- Questions can be asked by clicking on the ‘Q&A’ or ‘Raise Hand’ button during the webinar. Your question will be answered at the end of the presentation.
- Make sure to mute your audio line in case this has not been done automatically by the host.

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Closing date 11 June

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Next webinar – 29 June 2020

Briefing on pending European packaging legislation

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ECMA Antitrust Reminder

- ECMA is committed to compliance with the antitrust rules that aim to achieve free competition and fair terms for all business transactions.
- The participants in this meeting hereby acknowledge that no issue will be discussed that will violate antitrust rules and that during this online meeting these rules shall be respected under all circumstances.

Eija Hietavuo

Chairwoman of the 4evergreen Alliance and SVP Sustainability Packaging Materials at Stora Enso

EUROPEAN CARTON MAKERS ASSOCIATION

ECMA webinar 8.6.2020

4evergreen alliance update
Eija Hietavuo, chairman 4evergreen

Agenda for today

- **4evergreen foundation and status**
- **McKinsey baseline study for 4evergreen**
- **Steps forward and industry alignment**

4evergreen foundation and status

McKinsey baseline study for 4evergreen

Steps forward and industry alignment

Background – History of the 4evergreen alliance

Driven by legislation, disruption in plastic packaging and new products entering the market - fiber based packaging systems need to evolve, improve and expand applicability

Enhancement of functional properties, e.g.
- Barriers
- Weight
- Food contact

Recyclability guidelines and testing protocols

Context based design thinking

Design for circular with waste hierarchy in mind

Life cycle thinking embedded (circular 2.0)

Consumer education and citizen activation.

Optimised collection/sorting systems to improve total economics

Clearer product categorization for collection & sorting

Reduced down-grading of materials

Recycling of all fractions

High-value markets for secondary materials

New uses for recycled fibres

NOT EXHAUSTIVE

Purpose & ambition for 4evergreen

A cross-industry alliance to boost the contribution of fibre-based packaging to a circular and sustainable economy – that minimizes climate and environmental impact

4evergreen's ambition is to drive and support the development of

- **Transparency and traceability** of sustainable supply chains
- Industry-recognized **guidelines for packaging design**
- **Optimized collection and recycling systems** – and their accessibility
- Environmental credentials through **scientific facts**

+

Platform for pre-competitive **collaboration, sharing and innovation**

Positions and narratives to **inform, educate, and engage** consumers as well as industry and policy makers

Industry strategy and mobilization approach to further develop sustainable fibre-based packaging

4evergreen value proposition

Scale

Sufficient scale to be influential in discussions with policy makers and regulators and shape the regulatory environment

Diversity

Diversity of perspective to develop the best and most concrete solutions for future fibre-based packaging, through

- A Europe-wide network spanning the full packaging value chain
- Pre-competitive forum for collaboration and innovation

Action

Power to implement and get to action by having

- Direct access to stakeholders throughout the value chain, including consumer good companies, retailers, recyclers, etc.
- A unified paper producing industry in Europe through CEPI

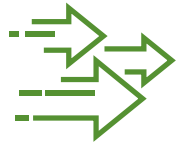
The ability to influence and shape future European packaging to higher circularity and sustainability

4evergreen's desired position

All fibre-based packaging and food service articles are **recyclable and effectively accepted** in collection and recycling systems

Fibre-based packaging is **broadly recognized among stakeholders** as a key element in making packaging more circular and sustainable

The full value chain is **working efficiently to jointly improve** fibre-based packaging systems and closing identified performance gaps



Evidence to demonstrate that the industry is **taking clear steps** to improve performance, boosting our contribution to circular economy

4evergreen Progress status

- **4evergreen** was officially founded on **November 22nd, 2020** with **29** companies joining the fibre based packaging circular alliance. **Today** there are **50 4evergreen member companies** active in the alliance.

- The formal **4evergreen alliance kick-off meeting** took place in Brussels **on January 21st** and it is the first and only face to face meeting of all members as of yet.

- **Three main workstreams were kicked off in January**: *Sourcing, Design and Materials*, *Information and Communication and Collection, sorting and re*cycling. These are led by member companies and each workstream has subsequently working groups addressing key topics.

- **A 4evergreen Program Director, Susanne Haase** started in late April and is supported by a CEPI project manager and CEPI PA assigned for 4evergreen part time. Current **focus areas** of action are related to **communication and regulatory coordination where a Brussels based agency, Interel** is supporting 4evergreen as well completion of the **McKinsey led baseline mapping** which will inform the action plan moving forward.

4evergreen foundation and status

McKinsey baseline study for 4evergreen

Steps forward and industry alignment

McKinsey baseline mapping in three connected work packages

I Flow baseline and future perspective

Create flow baseline, mapping material flows from raw materials sources used in P&P for production to conversion, usgae and end of life scenarii, for selected countries and at European level, taking into account trade flows at each step

Identify and quantify trends to 2030 by type of materials to derive 2030 baseline flows and key implications for 4evergreen members

II Current state of collection/sorting/recycling

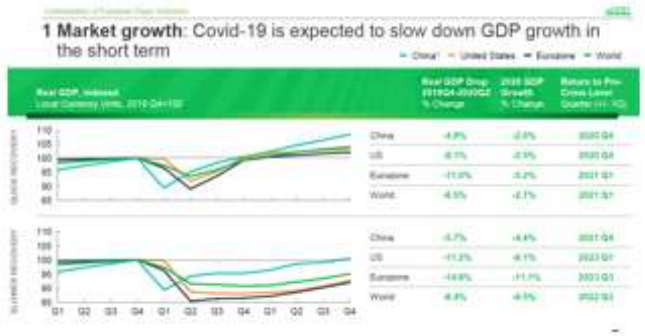
Develop a perspective on the current design of collection/sorting/recycling systems in selected European countries (with a deep-dive on Germany and the UK), identifying critical drivers supporting higher recycling rates through detailed benchmarking

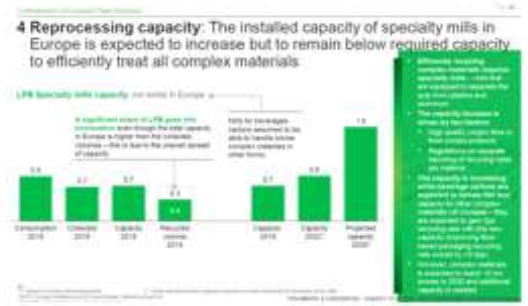
III Packaging technologies' impact on recycling

Create transparency on relative recyclability of selected existing and emerging packaging technologies, mapping key features of each technology, assessing key related painpoints and impact on recyclability both through collection and through recycling process

Derive high level recommendations on design choices to optimize packaging recyclability

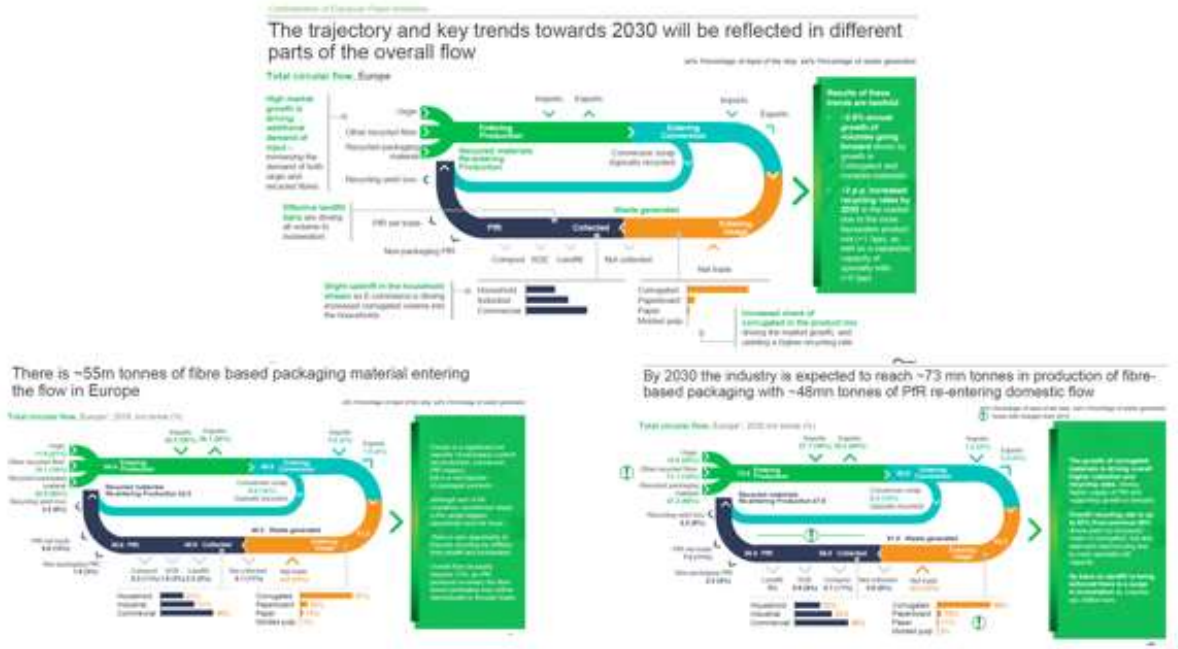
WP1: Four major trends are driving the trajectory to fibre-based packaging flows in 2030





Note: Data validation underway – for illustration only

WP1: The European fibre flow analysis with 2030 projections



Note: Data validation underway – for illustration only

WP2: Assessing current recycling systems: focus on six markets

Note: Data validation underway – for illustration only

WP3: Packaging technologies' impact on recycling

Note: Data validation underway – for illustration only

Contents

4evergreen – 2020 roadmap from fact finding to action

Formation

Knowledge/fact base

Building fact base (McK-intensive)

- Flows, now and future (change factors)
- Recycling systems current state
- Techn. Mapping (descriptions and recyclability)

Finding ways for 4evergreen to work most effectively

Direction setting (22.7-)

Setting 4evergreen strategic direction and 2020-22 action plan

Proposal for approval at the 4evergreen steering group meeting on July 22nd

Knowledge/fact base

Continue building and sharing knowledge in areas needed

Concrete external actions

Specific no-regret actions (e.g., extended recycling guidelines, material innovation "challenges")

No regret influencing activities (starting with those that are independent of strategic direction)

Thank You!

Questions?

Your questions will now be answered on a first come, first answered principle.

Please use the Q&A button in the control panel.

EUROPEAN CARTON MAKERS ASSOCIATION

Nick Thompson

Materials Development Director – DS Smith Plc

EUROPEAN CARTON MAKERS ASSOCIATION

Nick Thompson | Materials Development Director

EUROPEAN CARTON MAKERS ASSOCIATION

DS Smith

Redefining Packaging for a Changing World

8th June 2020

DS Smith

About us

A FTSE 100 company

Over 31,000 employees in 37 countries, over 270 sites

17 billion boxes produced annually.
5 million tonnes of paper for packaging.
Developing our customers' sustainable packaging solutions

Largest corrugated recycler in Europe.
From design to production, supply to recycling, we offer our customers a joined-up solution

Our Purpose

Redefining Packaging for a Changing World

- Developing the right strategies
- Thinking differently
- Innovating together
- Putting sustainability at the heart, developing circularity

We are living in a changing world

E-COMMERCE EFFECT

- Rapid adoption of e-commerce and growth in delivery of packages
- With less retail, more packaging is ending up in homes

TOWNS AND CITIES

- Recycling infrastructure was designed in a pre-e-commerce era
- A creaking recycling infrastructure that is nearing overload
- Under-investment in waste management systems in many countries

LESS PAPER – MORE PACKAGING

- Decline in newsprint & graphics papers
- Increase in packaging fibres in system

Recycled Paper-making: raw materials

For DS Smith - What's good & what's not?

✓

- Paper fibres – kraft, HW, SW
- Repulpable / separate-able
- Recyclable

✗

- High-filler content (highly coated, etc)
- Plastics, metals
- Food contamination
- High moisture
- Non-repulpables

?

- Newsprint
- Grey board

(low fibre strength)

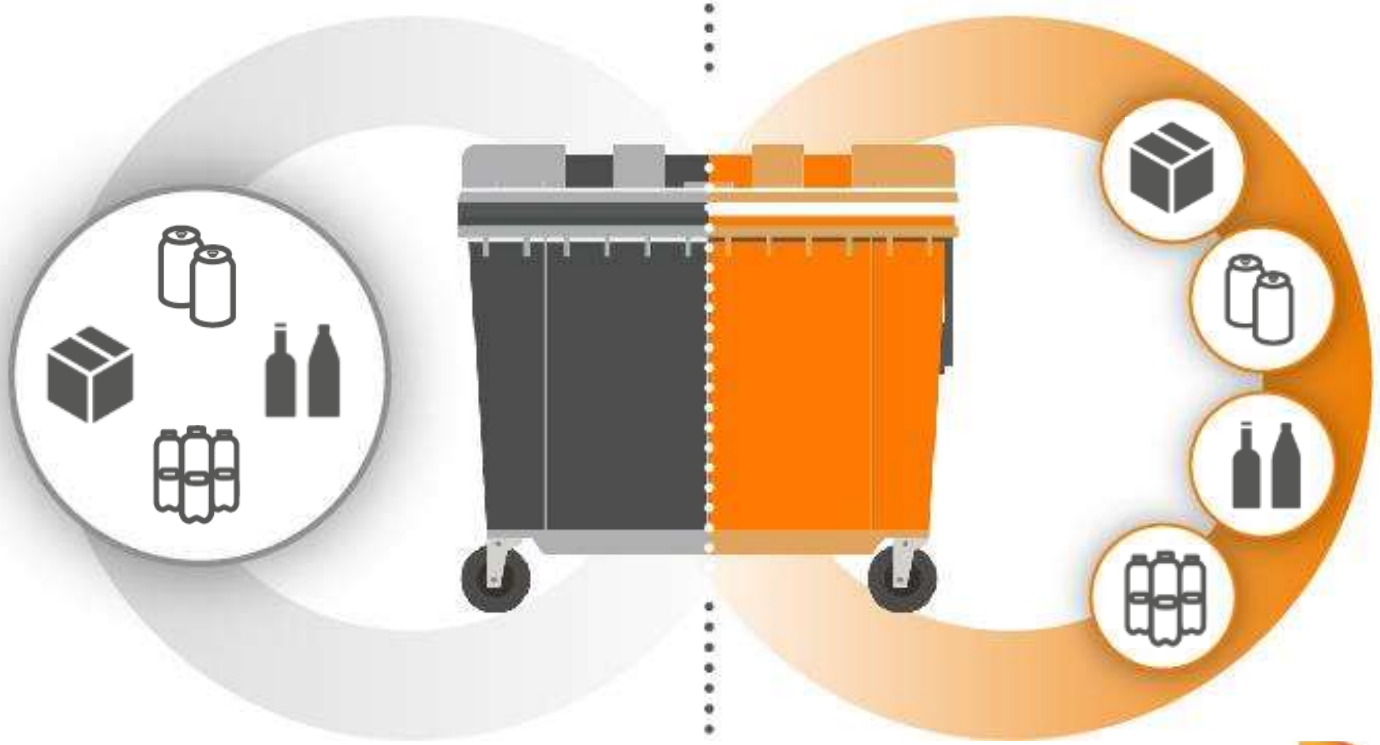
- Challenge to all – to reduce non-recyclable / non-repulpable packaging (eg PE coatings, etc)
- Re-pulpability and ability to separate non-fibre portions of packaging → circularity

Source segregated collections

- In DS Smith, we're using Near Infrared Technology to assess the quality of material arriving from household and commercial collections
- EN643 allows 1.5% non-paper fraction (mainly plastic) within the incoming material stream

Co-mingled	VS	Source segregated

- Commingled mixed papers coming into Kemsley, UK have an average of 3.53% plastic contamination with some average readings in excess of 5.5%
- Source Seg mixed papers coming into Kemsley have an average of 1.28% plastic contamination



Further investment in Quality

Moisture Control Microwave System introduced to improve the quality of the recycled raw material and reduce the moisture content

Actions and support measures needed in EU paper recycling

- EU end-of-criteria for paper based on EN 643 standard to incentivise quality
- Eco-design and phase out unrecyclable products
- What to do with contaminants & plastic waste in recycled paper streams?
- Measures and incentives to boost the demand of products containing recycled paper fibres
- XXX Importance of recycling during the pandemic XXX

Sustainability challenges

Up to 29%
of supermarket packaging is not recyclable

Source: Which?

39%
of online shoppers are concerned by excess packaging

Source: Mintel

47% of online shoppers want the delivery of their parcels to be carbon-neutral

Source: International Post Corporation

170kg
The average European generates 170kg of packaging waste per year

Source: Eurostat

50% of e-commerce packaging is more than a quarter empty

Source: DS Smith, Empty Space Economy

Sustainability challenges cont…

€24bn
investments in low-carbon technology are needed in the pulp and paper industry to reach Paris Accord ambitions

Source: CEPI

81%
of the world's energy mix still comes from fossil fuels

Source: International Energy Council

90%
of pulp used by European paper mills originates from forests in Europe

Source: CEPI

2bn
Forests absorb 2 billon tonnes of carbon from the atmosphere per year

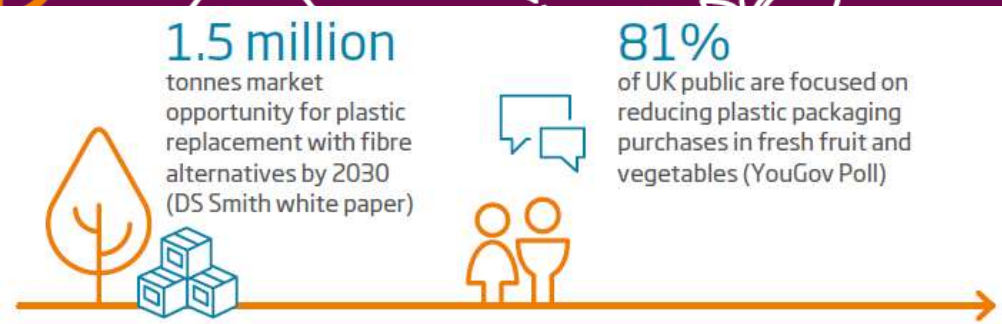
Source: FAO

37%
of the public believe there is a joint responsibility between governments, brands and manufacturers to reduce unnecessary packaging

Source: Ipsos Mori

1.5 million
tonnes market opportunity for plastic replacement with fibre alternatives by 2030 (DS Smith white paper)

81%
of UK public are focused on reducing plastic packaging purchases in fresh fruit and vegetables (YouGov Poll)



What are we doing in DS Smith to lead the way?

- 100% recyclable/reusable by 2025
- Designing customer's packaging with the future in mind; focusing on circularity:
  - Circular design principles
  - Circulytics – EMF project
  - 4evergreen

Risk-averse recyclers:

The average European has thrown away a whopping

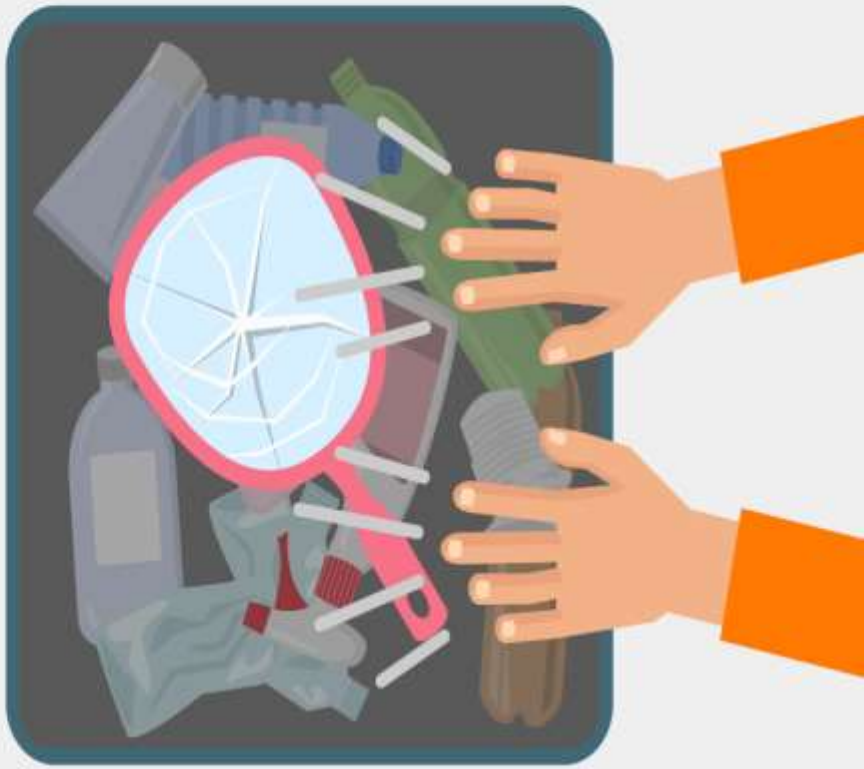
of their recyclable goods into the rubbish bin.

tonnes of materials, which could be recycled,
is going to landfill or being incinerated each year
because people don't know where it should go.

Risk-averse recycling costs the economy

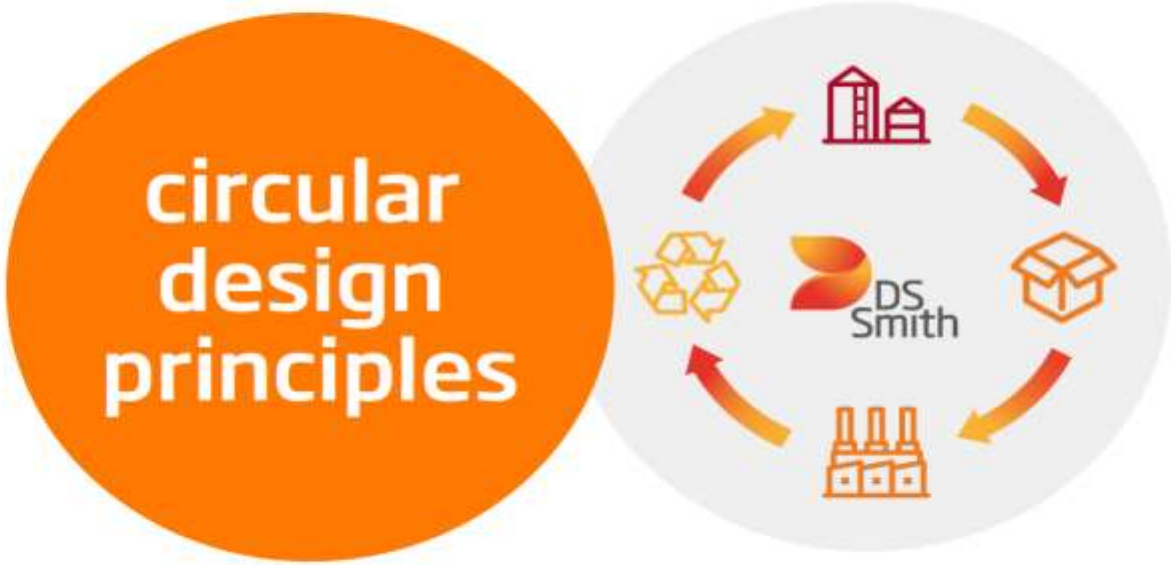
€1,864m

27%



say they are wish-cyclers and put things in the recycling bin, despite not knowing if it can be recycled.

DS Smith - with expert input from the Ellen MacArthur Foundation - **has created a set of**



to help companies design better packaging for a circular economy. To learn more, click here.

It's time to help companies design better packaging for a circular economy.

Thank You

Danke Dankjewel Благодаря 谢谢 Hvala Děkuji Tak Aitäh Kiitos Merci Ευχαριστώ

Köszönöm Grazie Paldies Ačiū Ви благодарам شكرا لكم Dziękuję Obrigado Mulțumesc

Ďakujem Gracias Tack ขอบคุณ Teşekkür ederim

The Power of Less®

Questions?

Your questions will now be answered on a first come, first answered principle.

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Thank you for your attention!

- For any questions please contact mail@ecma.org
- You will receive a short survey to help us improve our future webinars

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