

OUR JOURNEY TOWARDS A CIRCULAR ECONOMY FOR FLEXIBLE PACKAGING



► What is flexible packaging? ¹

Flexible packaging is an important part of our modern world. It protects food and other goods and is generally made of different types of plastics but can also include other materials such as paper or aluminium foil.

For example, it ensures food products reach consumers safe and fresh, preserving nutrition, taste and quality. This versatile packaging also helps protect and preserve, reducing CO2 emissions associated with food loss.

In the case of medical products and pharmaceuticals, flexible packaging keeps them sterile and protected while also making it possible to make them tamper and counterfeit proof.

Being very light and thin, flexible packaging can protect large amounts of products with far less

material than alternative packaging. This makes it a popular and resource efficient way to package goods, while also reducing the environmental impact of transportation.

The qualities that make it so useful, lightweight and resource efficient also present a challenge once packaging becomes waste. The financial incentives for developing the required collection and recycling for flexible packaging are currently less compelling when compared to many heavier packaging alternatives. This results in valuable materials being lost after a single life as a package; and, like all products, it can end up as litter in the environment if not disposed of correctly.



¹ An extensive definition of flexible packaging and its elements can be found in the CEFLEX 'Designing for a Circular Economy' guidelines.

► Why a circular economy for flexible packaging and need for CEFLEX?

A circular economy is a transformation from the linear ‘take, make and dispose’ approach, to an economy that is restorative and regenerative by design. The reward for making this significant shift is substantial environmental and social benefits, but also an economic opportunity to create sustainable innovation and growth.

For flexible packaging, as other sectors, achieving a circular economy is a responsibility of the entire value chain and can only be accomplished through broad collaboration, innovation and investment.

Many companies and organisations associated with flexible packaging in Europe are driving this transformation and have come together through the CEFLEX initiative. Together, we are working to ensure

flexible packaging flows back into the economy and displaces the need for virgin materials.

CEFLEX brings the entire value chain together to tackle the complex technical and business barriers to a circular economy. A common vision is the initiative’s 5-step roadmap to build a circular economy for flexible packaging. It has been endorsed by CEFLEX stakeholders, together with a set of actions needed by each part of the value chain to achieve it.

Only by working together, with agreed focus, can we collectively achieve the flexible packaging value chain’s own ambitious sustainability goals, recyclability targets and prevent waste and pollution.

► A race against time

A sense of urgency from a number of perspectives is converging and need to work together to achieve a circular economy. Major brand owners such as Nestlé, Pepsi, Coca Cola, Ferrero, Mondelez, Unilever and Procter & Gamble have all made ambitious commitments to make 100% of packaging recyclable, reusable or compostable by 2025. Policy makers are committed to major advances in recyclability, including 55% of all plastic packaging has to be recycled by 2030 Europe-wide. And public awareness and demand for action to protect the environment is growing.

It is a race against time. Developing new end markets for recycled materials technology, infrastructure and a single European market for waste to make plastics circular is a long process based on trust, mutual understanding. Creating the





necessary scale in collection, sorting and recycling and stimulating the investment needed to achieve it will be a major challenge. Facilitating technologies in digital barcode-based sorting, delamination, and chemical recycling need to become breakthrough technologies, implemented at scale.

However, triggering all of these vital parts of the circular economy start with a common vision of what is needed and how to deliver it – and a shared road map was the first major deliverable of CEFLEX.

Making it a reality is dependent on both scale and speed. Corporate sustainability ambitions, regulatory pressures² in addition to public desire for

action and accountability on plastics and the environment might just be the mix to make it happen; but intense collaboration and leadership on the technical challenges is required.

The good news is that more than 80% of flexible packaging is mono-material Polyethylene (PE) or Polypropylene (PP), meaning it can be recycled into new valuable materials; becoming either new packaging or flowing back into the wider circular economy. While this is happening in some places in Europe, we must repeat and extend this good practice until it is an accepted norm across the continent as a foundation of achieving a circular economy.

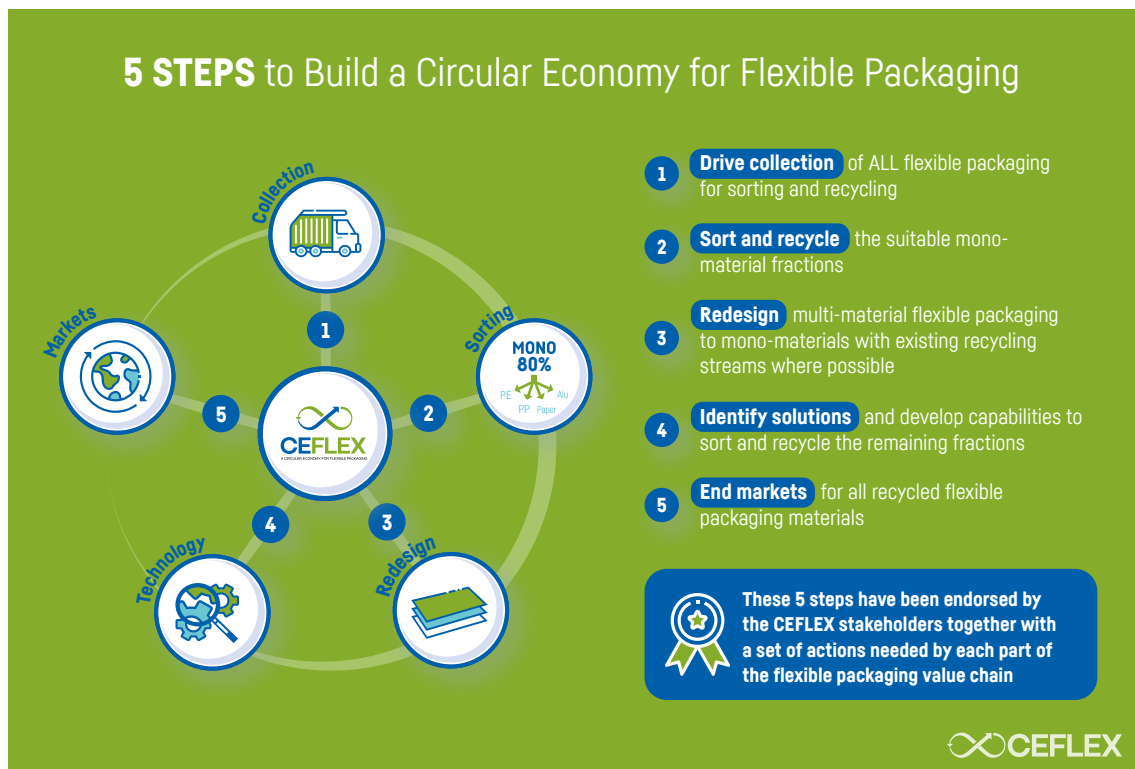
² 55% of all plastic packaging has to be recycled by 2030 Europe-wide. Nationals moving even faster: In Germany, for instance, 63% of plastic packaging must be recycled by 2022, up from 40% in 2018.

5-steps to building a circular economy for flexible packaging?

CEFLEX stakeholders are working across the entire value chain to accelerate solutions in collection, sorting, packaging design, facilitating technologies and sustainable end markets – all underpinned and incited by an environmental and economic business case.

A 5-step roadmap to build a circular economy for flexible packaging has been endorsed by CEFLEX stakeholders, together with a set of actions needed by each part of the value chain to make it happen.

By 2025, we target an established collection, sorting and reprocessing infrastructure and economy for post-consumer flexible packaging across Europe. It will be based on end-of-life technologies and processes which deliver the best economic, technical and environmental outcome for a circular economy.

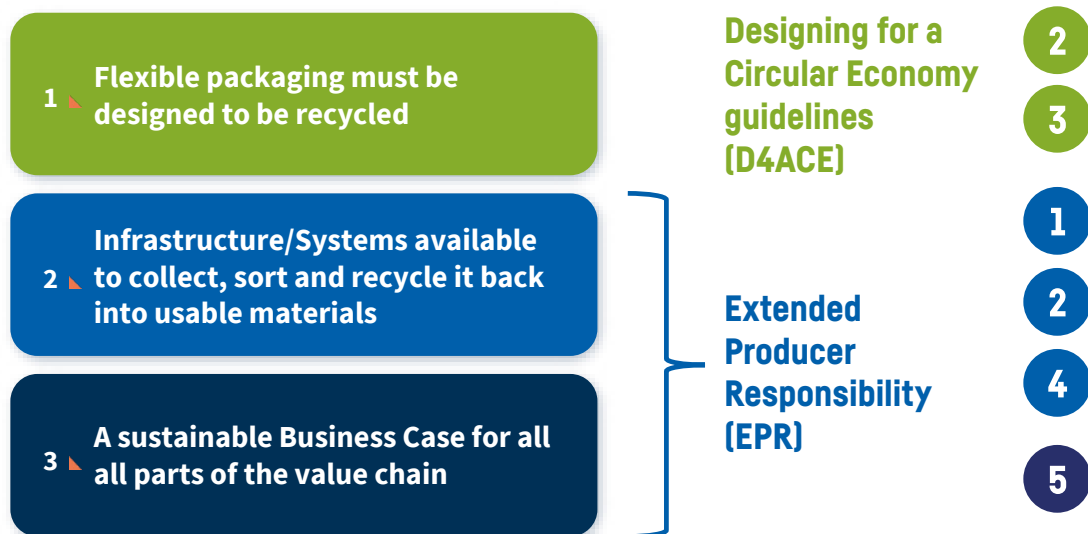


3 conditions for success

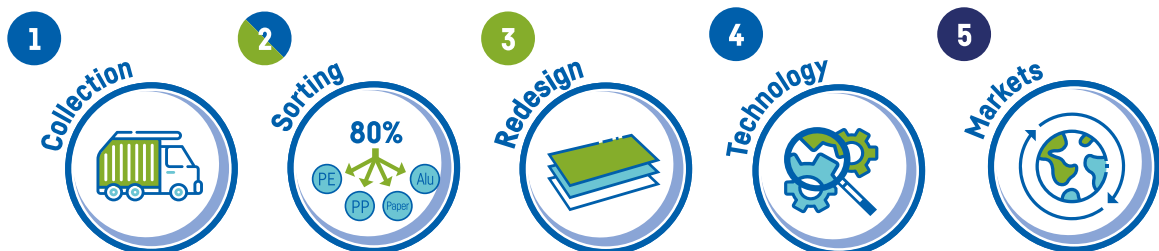
Each of the steps of the CEFLEX roadmap requires the same three conditions to be in place – and happening in parallel - for them to be realised:

1. **Consumer flexible packaging to be designed to be recycled** without compromising the delivery of the product for which it was designed
2. **Ensure the infrastructure and systems are in place for it to be collected, sorted and recycled** back into usable materials throughout Europe
3. For there to be **a low risk sustainable business case for all the actors in the value chain** including the end markets using these recycled materials

Elements Needed for a Sustainable Circular Economy



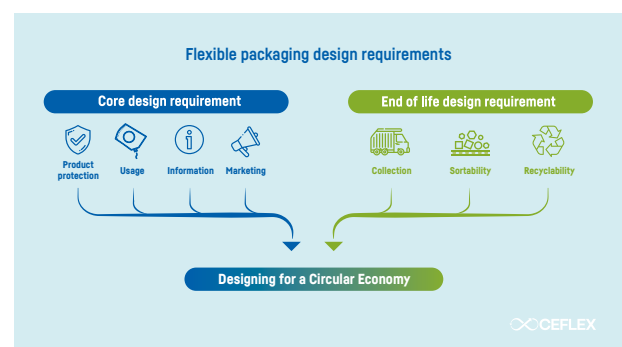
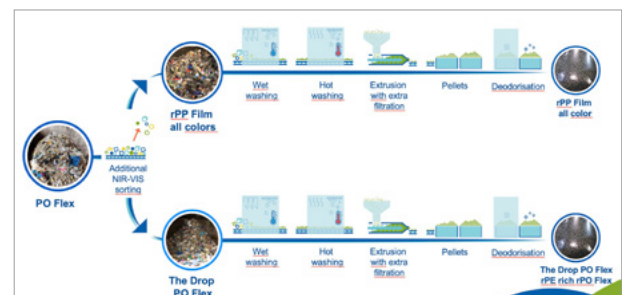
*Available from ceflex.eu/guidelines



Seven technical workstreams and initiatives comprised of CEFLEX stakeholders are making credible and robust progress to achieve this. They collaborate to identify and implement solutions to achieve the CEFLEX vision and produce key deliverables to support their uptake and adoption.

Highlight initiatives supporting the CEFLEX roadmap in 2020-21:

- The 'Designing for a Circular Economy' guidelines which aim to help flexible packaging become circular by providing **clarity to brand owners, retailers, converters and film producers and others in the value chain** on what structures they should be innovating to support circularity; Helping to increase the level of collection, sorting and recycling; and producing higher quality recycled materials to be kept in the economy and used in a wider number of sustainable end markets.
- A trusted partner to reform Extended Producer Responsibility (EPR) mechanisms to **drive cost effective collection and recycling of flexible packaging to make it circular, sustainable and economically viable**
- Developing industrial scale trials of proven pilots in a Quality Recycling Process – providing higher-value end market applications for flexible packaging. This is **building the business case for investment and delivery** of recycling able to unlock the environmental and economic potential of mechanical recycling.
- Detailed evaluation of facilitating and accelerating technologies** in sorting of multi-material structures, barrier removal, improving the quality of and recycling multi-materials and chemical recycling. CEFLEX is currently working closely with Cadef Deinking, saperatec, Holy Grail 2.0, APK and more.
- Mapping the material flow of flexible packaging in a circular economy, based on existing collection, sorting and recycling best practices** - matching them to potential end markets and increasing understanding of what capacity is needed to manage material placed on market.



► What is the Circular Economy for Flexible Packaging (CEFLEX) initiative?

CEFLEX is a collective of over 160 organisations representing all parts of the value chain connected to flexible packaging. Together, we work to make all flexible packaging in Europe circular by 2025.

Our aim is for all flexible packaging to be designed for easy collection, sorting and recycling – with valuable new markets and applications created for the recycled materials.

Further information at www.ceflex.eu or on our social media channels.

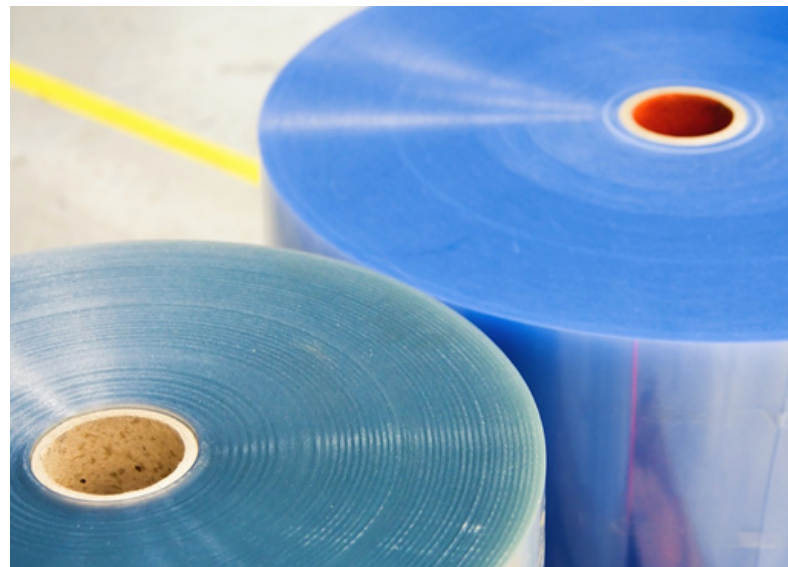
The Circular Economy for Flexible Packaging (CEFLEX) initiative is a collaboration of over 150 European companies, associations and organisations representing the entire value chain of flexible packaging. Together, we work to make all flexible packaging in Europe circular by 2025.

The initiative is committed to avoiding waste and pollution by redesigning consumer flexible packaging and ensuring an appropriate collection and recycling infrastructure in all European countries.

This will enable used flexible packaging to be cost effectively collected and recycled with valuable new markets and applications created so the recycled packaging can be used again and again.

CEFLEX stakeholders represent the full flexible packaging value chain including: raw material producers (plastics, paper and aluminium foil), ink, coating and adhesive suppliers, film producers and flexible packaging converters, brand owners, waste management companies, recyclers, extended producer responsibility organisations and technology suppliers.

All contributors are committed to making flexible packaging circular, so it remains and is increasingly recognised as a responsible and relevant packaging format for the future.



Together, they collaborate to identify opportunities to increase recycling, develop sustainable end markets for these recycled materials and work to stop leakage into the natural environment.

The circular economy we are committed to being part of avoids waste and pollution by redesigning consumer flexible packaging, and also provides appropriate collection and recycling infrastructure in all European countries. This will enable flexible packaging to be cost effectively recycled and the resources returned to the economy to be used again and again.

- ▶ **Our aim** is to enable collection of all flexible packaging and recycle 80% of it into new valuable materials; becoming either new packaging or flowing back into the wider circular economy.
- ▶ **Our vision** is a Europe where flexible packaging is integral to a truly circular and sustainable future.
- ▶ Together, this is our “**mission circular**”; to create multiple lives for flexible packaging materials.

OUR MISSION CIRCULAR

CEFLEX’s ‘Mission Circular’ commits to collection of all flexible packaging and over 80% of the recycled materials channelled into valuable new markets and applications to substitute virgin materials

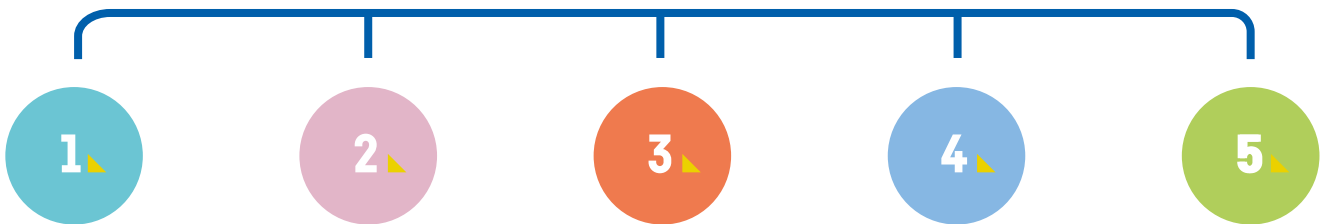


Further information can be found at **www.ceflex.eu**, including a full list of the stakeholders participating in the initiative or on our social media channels.

CEFLEX operations and ways of working

Stakeholders are invited to identify and participate as representatives in one of **five value chain groups**, reflecting the role they play in the flexible packaging value chain. They are:

Value Chain Group



Role in Value Chain



Each value chain segment is represented by a member of the CEFLEX Steering Committee. Representatives to the committee are nominated and elected for an initial period of two years*.

*For all governance issues, please consult the consortium agreement

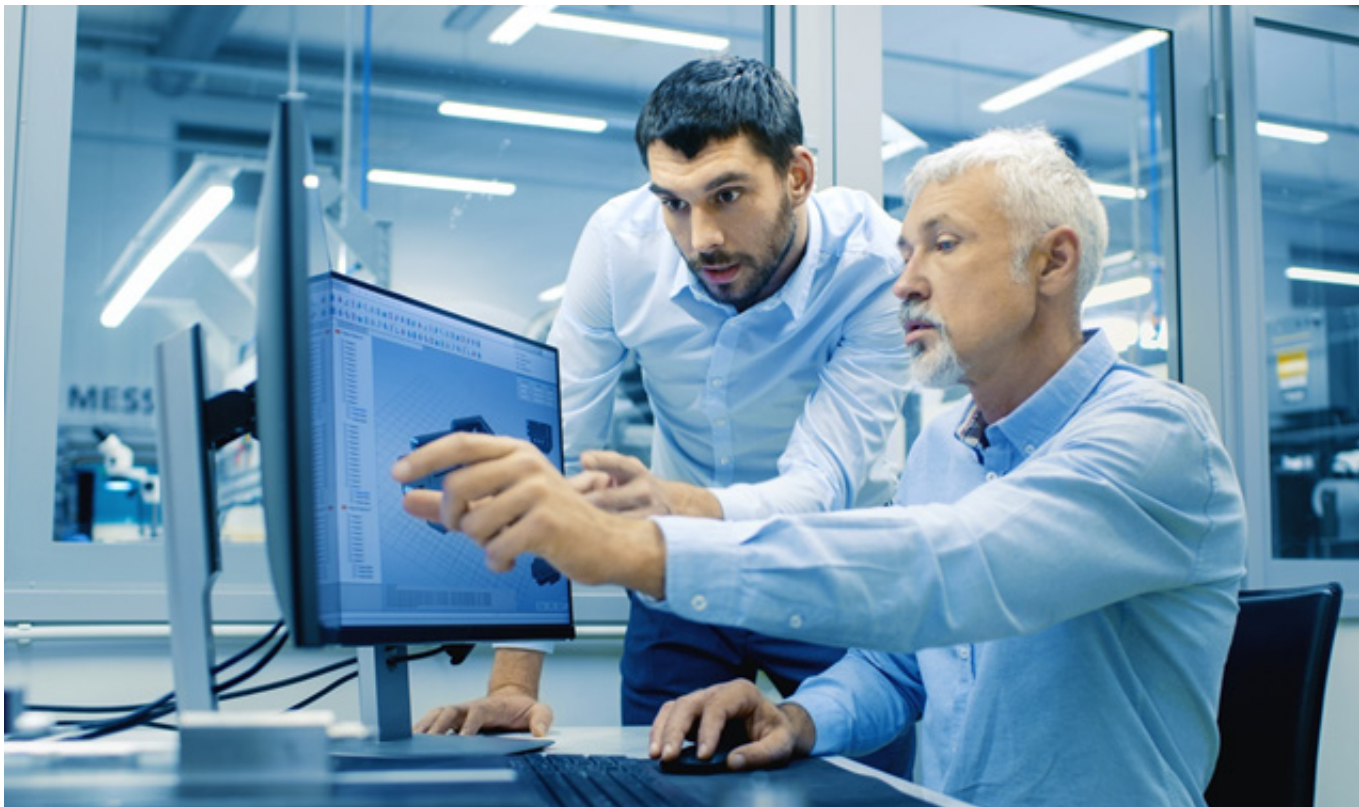
▀ Collaboration with impact

CEFLEX stakeholders are in constant collaboration across the entire value chain to accelerate solutions in collection, sorting, packaging design, facilitating technologies and sustainable end markets – all underpinned and incited by an environmental and economic business case.

Value chain meetings, convened and lead by the respective CEFLEX steering committee members,

assess progress against the roadmap and fine tune the steps required to achieve it.

Putting all this into action, they collaborate and deliver activities across seven thematic workstreams, identifying and implementing solutions to achieve the CEFLEX vision.



Operational workstreams

The initiative delivers activities across seven collaborative workstreams, identifying and implementing solutions to achieve the CEFLEX vision.

All stakeholders can participate in as many, or as few, CEFLEX workstreams as they wish. Involvement in a workstream may include:

-  Participation in workstream meetings and calls
-  Contributing and/or making expertise/resources available
-  Supporting the drafting/review of deliverables

Each workstream is supported by a team of stakeholders and a CEFLEX workstream consultant. Together, they agree on a frequency of meetings and their agenda.

W1 Design Guidelines: Design for a Circular Economy Guidelines that enable flexible packaging to be part of the circular economy

W2 Understanding the market: Understand and map what flexible packaging is being placed on the European market and post-consumer waste management options

W3 Sustainable End Markets: Ensure there are viable and sustainable end markets for recycled materials

W4 Business Case: Demonstrate the environmental and economic business case for CEFLEX's vision

W5 Proof of Principle: Demonstrate the viability of CEFLEX's vision through pilot projects

W6 Facilitating Technologies: Identify and support technologies that will enable circularity for flexible packaging

W7 Communication: Promote circular economy solutions for flexible packaging and the work of CEFLEX



Some defining characteristics of CEFLEX workstreams and their deliverables:

-  Credible and robust
-  Transparent and well documented
-  Produce work drawing on multiple sources, country experience and parts of the value chain

Meetings and contact points

General Meetings

The CEFLEX initiative typically meets face to face three times a year for a General Meeting. All stakeholder main contacts are invited, and each stakeholder organisation is requested to attend with no more than two persons to keep the meeting productive, operational and manageable. Venues are typically chosen for their accessibility and convenience, i.e. close to a major transport hub.

Value Chain Meetings

Value chain meetings, convened and lead by the respective CEFLEX steering committee members, assess progress against the roadmap and fine tune the steps required to achieve it. They may meet in person or virtually during the course of a year as required and when convened by the steering committee representatives. Often in preparation for or in conjunction with a General Meeting



– to gather input and direction from the stakeholders on key issues, development of the CEFLEX roadmap and deliverables.

Workstream Meetings

The workstream consultant and stakeholder team agree on a frequency of meetings and their agenda together and as appropriate to achieve target deliverables. Meetings may be in-person or virtual. Smaller groups with a higher level of dedication and focus on an action may choose to meet more regularly – i.e. mobilising a pilot or industrial trial to establish proof of concept and determine a clear business as well as environmental case.

Alignment workshops

The CEFLEX initiative increasingly required to state a common position on various aspects of the circular economy. An initial workshop identified 12 identified key issues the future circular flexible



packaging value chain, and targeted workshops are tackling them in turn. They aim to develop a proposal for a common position for each of them.

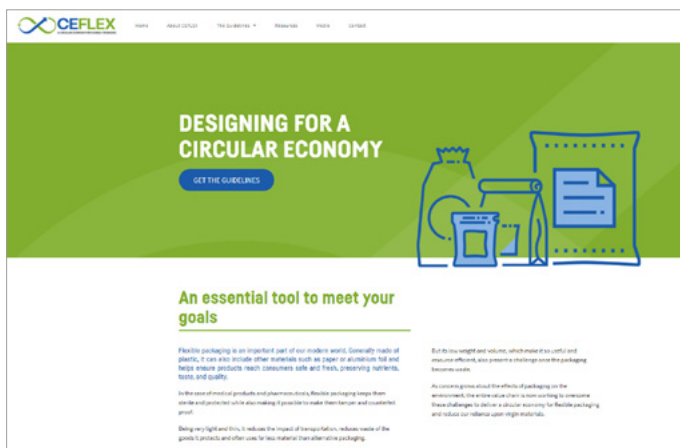
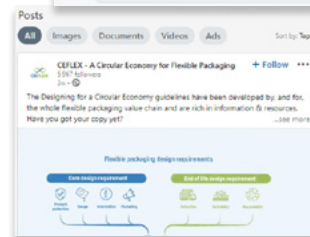
Webinars

Regular webinars for CEFLEX stakeholders – approximately 6 per year – are held to explore key issues, share technical insights and help galvanise progress. These are instigated by workstreams in conjunction with CEFLEX communications.

Webinars open to wider industry and all interested parties are held on an ad hoc basis – approx. 2-4 per year – often associated to the public launch or roll out of a deliverable.

Online

The CEFLEX website and social media – LinkedIn, Twitter and YouTube – carry regular developments and content documenting and bringing our



journey towards a circular economy to life. They feature regular video and text interviews, blog-style posts and stakeholder developments.

Stakeholder updates

A stakeholder focused update (3 x year) gives an overview of key issues, developments and planned activities from the initiative and its seven workstreams.

CEFLEX stakeholder space

A central online repository for CEFLEX documents, working documents and resources is made available through a Google Drive.



ceflex.eu

 **@MissionCircular**

 **You** 