Acronym and title

The acronym of the project must be used always in capital letters, with the hyphen.
The use of the full title is optional:
CIRC-PACK – Towards circular economy in the plastic packaging value chain

Tagline (Claim)

A new circular economy for the plastic packaging sector value chain.

One sentence

The CIRC-PACK project will develop alternative bio-based and recyclable plastics, and new types of multilayer and multi-material packaging, while sorting and recycling processes will be enhanced, promoting the circular economy and leading to a more sustainable future.

Bullet points

The CIRC-PACK project will focus on:

- Seeking and validating 100% new biodegradable materials from renewable resources for applications along the plastic value chain;
- The design and validation of new packaging solutions that will enable and/or facilitate the end-of-life separation of materials;
- The use of recycled materials as raw materials and the creation of closed-loop recycling flows, as well as of a multi-sector cascade recycling process;
- Addressing the legal restrictions, bottlenecks and other non-technological barriers to facilitate a broader transition to the circular economy;
- Developing a life-cycle methodology to assess the performance of the new value chain in terms of circularity improvement;
- The demonstration of the environmental, social and economic impact and sustainability of the new circular value chain contributing to the uptake of project solutions;
- The development of new sustainable business models to enable a circular use of plastic materials.

Half page

CIRC-PACK (*Towards circular economy in the plastic packaging value chain*) is a three-year EU-funded project that aims to develop a more sustainable, efficient, competitive, less fossil fuel dependent, integrated and interconnected plastic value chain.

To this end, the consortium will work in the following three areas with three demo cases:

- i)   decoupling the chain from fossil feedstock;
- ii)   introducing innovative formats and reducing the negative environmental impact of plastic packaging; and
- iii) creating an effective after-use plastics economy.

The CIRC-PACK project will provide breakthrough biodegradable plastics using alternative bio-based raw materials, which will have an instrumental role to play along the plastic value chain. In addition, smart eco-design measures will be developed and adapted also to the new bio-based materials previously developed, to facilitate the collection and recycling of multilayer and multi-material packaging. These innovations will contribute to greatly reduce the packaging footprint, by increasing the bio-based content and using compostable materials.

Finally, a multi-sectorial approach along the plastic packaging value chain will be applied, which will have critical impacts also in other value chains (automotive and absorbents), increasing the typology of materials, valuable sub-products and the amount of recycled materials used.

All CIRC-PACK activities will be supported by non-technological and advanced methodological analysis in order to facilitate the transition from the current linear plastic packaging value chain to circular economy principles, which will trigger a broad deployment of the tested solutions.

In addition, awareness raising activities targeting consumers and related stakeholders will boost an enabling regulatory environment, the replicability of developed solutions and the adoption of new business models.

The CIRC-PACK project is in line with the objectives of the platform representing **Plastics Recyclers Europe** and the PPP Bio-based Industries, as well as with European Commission´s challenges regarding a better management of waste, expecting an increase of the collecting rate up to 48% and a reduction of landfilling rate up to 15% by 2020.

Key messages by technologies

Technology

CIRC-PACK demonstrates and validates, bridging the innovation gap, several technological innovations. Indeed, some of the systems to be piloted in CIRC-PACK, such as the polymerization process, are new technologies that, once demonstrated by the project, will open up a pathway to their commercialisation. This brings a new opportunity for the technology manufacture plastic industry to develop around the outputs of CIRC-PACK.

CIRC-PACK will strengthen the competitiveness of the European plastic sector through the recyclability, the cost reduction related to extracting and transporting raw material resources and the high quality which has always been a relevant referent of the European plastics. Through this project, the European plastic sector will be boosted: this sector aims to grow at the same rate than the global plastic production, around 14% annually.

Economy

CIRC-PACK proposes - through the circular economy - a cost reduction related to extracting and transporting raw material resources, which will boost the European plastic industry to lead the high global competitiveness.

The CIRC-PACK results penetration in the market could rise the turnover of the European plastic sector up to 5 Bio € / year by 2030. This result will support the target from the European Commission to increase the industrial share of Europe's GDP from 15.3% to 20% by 2020. Furthermore, the plastic sector has a multiplier effect throughout the other plastic-user value chains (healthcare, energy generation, aerospace, automotive, maritime, construction, electronics, textile, etc.) therefore an increase of 10% in the value added of the European plastics sector could lead to a 4.4% increase in the value added of the whole EU manufacturing sector.

Environment

CIRC-PACK will contribute to the zero plastics to landfill by 2025 by a faster reduction of the quantity of plastics to landfill. The deployment of measures as CIRC-PACK will achieve to avoid 60 million tonnes of plastics during the period 2025-2037, equivalent to over 750 million barrels of oil or 60 billion euros.

Working language: English (UK)
Project website: http://circpack.eu/
LinkedIn: CIRC-PACK and Plasticircle group
Twitter: @circ_economy
Hashtag: #circpack