CIRCLE project

Newsletter

ISSUE #4 - September 2026



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Dear readers,

The CIRCLE editorial team is delighted to welcome you to this special newsletter celebrating 2 years of the project and the progress, collaboration & achievements of our journey so far.
In this edition, we feature an interview with Dr Thomas Grosse from Volkswagen on sustainability, circularity and the potential of CIRCLE's PLA solutions in the automotive sector.

Editorial

We also share project updates, including our 24-month Consortium Meeting and the CIRCLE Flagship Awareness Survey.
Our Circular section highlights key developments in the European bioeconomy and upcoming industry events across Europe.

We hope you enjoy this special anniversary edition!

VISIT US
https://circle-flagship.eu/

Circular Bio-based Europe Joint Undertaking

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Bio-based Industries Consortium

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CIRCLE Dialogue

In this issue, we are pleased to present a special feature with Dr Thomas Grosse from Volkswagen AG. The interview explores Volkswagen's sustainability and circularity ambitions and the potential contribution of the CIRCLE project to these goals.

Dr Grosse highlights the project's innovative approach of transforming food waste into bio-based PLA, combining sustainable feedstocks, material production and recycling within one circular concept.

The discussion also explores potential applications of PLA in the automotive sector, from production logistics to vehicle components, as well as key challenges such as cost, performance and material separation.

Overall, CIRCLE offers promising pathways towards more resource-efficient and circular automotive solutions.



What role does sustainability play at Volkswagen and how can the CIRCLE project contribute to achieving sustainability goals?

Sustainability is of great importance to Volkswagen and is firmly embedded in the Group's strategy. Under our "regenerate+" sustainability strategy, we aim to increase the share of circular materials to 40 percent by 2040. This includes not only recycled materials across all material groups, but also bio-based and CO_2-based alternatives. At present, the requirements proposed under the EU End-of-Life Vehicles Regulation are particularly challenging, especially with regard to mandatory recycled-content targets. Unfortunately, sustainable approaches originating from the bioeconomy have not yet been adequately considered in this legislative framework. Nevertheless, these approaches remain highly relevant to Volkswagen. The CIRCLE project can make an important contribution by developing innovative bio-based materials that support our circularity objectives while offering additional pathways towards a more resource-efficient automotive industry.

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CIRCLE Dialogue

What is the key benefit of the CIRCLE project from your point of view?

From my perspective, the key benefit of the CIRCLE project is its integrated approach to sustainability and circularity. The PLA developed within CIRCLE can contribute to the objectives of Volkswagen's "regenerate+" strategy while also supporting the reduction of CO_2 emissions. By using food waste as a raw material, the project makes productive use of existing waste streams and avoids the food-related conflict associated with some primary biomass resources. It can also reduce potential conflicts relating to land use and biodiversity. Another major advantage is that the technology already incorporates a recycling solution. PLA-based components can be processed and recycled in the same bioreactor as the food waste used for their production. Consequently, the project combines feedstock innovation, material production and end-of-life treatment within a coherent circular concept.

Where do you see potential applications of PLA in the automotive industry?

We see potential for PLA in a variety of automotive applications. One possible field is the logistics environment surrounding vehicle production, where suitable PLA-based products could be introduced without being directly exposed to the demanding operating conditions inside a vehicle. However, we also see promising opportunities for applications within the vehicle itself. Some automotive components already contain biomaterials, although these are often combined with plastics that are neither bio-based nor biodegradable. Using the PLA developed in the CIRCLE project could enable the creation of fully bio-based and biodegradable composite materials. These materials could subsequently be recycled in the project's bioreactor at the end of their service life. This would offer an opportunity to combine renewable feedstocks, suitable component design and an integrated recycling pathway in future automotive applications.

What could be challenging?

For PLA to be used successfully in vehicle applications, both its cost and its technical performance must be competitive. We apply the same testing conditions and quality requirements to PLA-based materials as we do to other materials used in our vehicles. A further challenge could be separating PLA from conventional plastics during the recycling of an entire vehicle. To address this issue, we are initially focusing on components that can be removed easily during vehicle dismantling and directed into a dedicated recycling pathway. At the same time, we are working with partners from the recycling industry to further develop material identification and automated sorting technologies. The objective is to enable PLA-based materials to be detected and separated reliably, including when they occur within complex post-shredder material streams after vehicle treatment.

Dr Thomas Grosse

Volkswagen AG, Berliner Ring 2, 38440 Wolfsburg, Germany

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CIRCLE Updates

24-MONTHS CONSORTIUM MEETING

On September 16, CIRCLE held its fourth consortium meeting online, bringing together project partners to review progress, discuss key developments, and align on the next steps for the project. The consortium reviewed the current project status, demonstration progress, regulatory developments, and automotive PLA applications. CIRCLE partners have successfully produced nearly 500kg of lactate salts, whilst TripleW's demonstration facility has received a one-year animal-byproduct permit. Four potential PLA applications for vehicle components were presented, considering future EU recycled-plastic requirements, recyclability, sorting, and material compatibility. The consortium also agreed on actions for the upcoming reporting period, including economic, environmental, KPI, and impact assessments, completion of validation tests, regulatory discussions, and further development and testing of protective foam and PLA-based component solutions.

CIRCLE AWARENESS SURVEY



How can we transform food waste into valuable, sustainable solutions?

The CIRCLE project is inviting stakeholders and members of the wider bioeconomy community to take part in its Awareness Survey #1 and help shape its communication and outreach activities. CIRCLE is developing a first-of-its-kind industrial-scale biorefinery that will convert food waste and other biomass streams into high-value bio-based chemicals. The survey takes only a few minutes to complete, and your feedback will help CIRCLE better understand stakeholder perspectives and ensure that future communication activities are relevant, accessible and useful.

TAKE THE SURVEY HERE

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NEWS

Circular

EU Bioeconomy: Trends, Biomass, and Competitiveness

A new European Commission publication highlights both the growing importance of the EU bioeconomy and the challenges linked to securing sustainable biomass resources. The bioeconomy already represents a major part of Europe's economy, supporting millions of jobs and generating significant economic value across sectors including food, materials, chemicals, energy and biotechnology. At the same time, increasing demand for biomass, pressure on land and ecosystems, and declining forest carbon sinks underline the need to use biological resources more efficiently.

The Commission's Strategic Framework for a Competitive and Sustainable EU Bioeconomy places stronger emphasis on industrial deployment, competitiveness and resilience, while promoting circularity and greater use of secondary biomass such as agricultural residues, by-products and organic waste. The framework also aims to accelerate investment, develop lead markets for bio-based products and technologies, and strengthen Europe's strategic autonomy by reducing dependence on fossil-based resources.

The framework further highlights the importance of innovation, research and stronger connections between primary producers, industry and end-users to unlock the full potential of Europe's biological resources. By supporting the development and scale-up of new bio-based solutions, Europe can strengthen industrial competitiveness while reducing environmental pressures.



These priorities reinforce the importance of innovative approaches that turn underused biomass and waste streams into higher-value products. CIRCLE's work on converting food waste into valuable bio-based chemicals and materials reflects this shift towards a more circular and resource-efficient European bioeconomy.

Read more here...

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NEWS

Circular

A Circular Future for Bio-Based Materials

A new report from the Ellen MacArthur Foundation, Circular by nature: a policy agenda for bio-based materials in a circular economy, highlights the need to rethink how bio-based materials are produced, used and managed across their value chains.



While circular economy policies have made significant progress in addressing finite materials, bio-based materials have largely been treated either as renewable substitutes for fossil-based resources or as commodities for extraction and processing. The report argues that this approach overlooks significant opportunities for economic resilience, climate action and biodiversity recovery.

To accelerate this transition, the Foundation proposes five policy priorities: designing for circularity and regeneration; enabling safe and effective material circulation; creating appropriate financial incentives; investing in innovation, skills and infrastructure; and strengthening collaboration across sectors and borders. These recommendations underline the importance of moving beyond simply replacing fossil-based inputs towards developing truly circular bio-based value chains.

For CIRCLE, the report reinforces the potential of approaches that valorise waste and secondary biomass streams, turning underused resources into high-value products while reducing pressure on primary resources and supporting a more circular European bioeconomy.

Find out more...

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EVENTS

Circular



INTERNATIONAL FORUM ON INDUSTRIAL BIOTECHNOLOGY AND BIOECONOMY (IFIB)

1-2 October 2026

Rome, ITALY

IFIB is an annual international event bringing together startups, companies, universities, research centres, investors, and industry stakeholders.

Throughout the two-day forum, participants connect through conference sessions, networking, and pre-arranged 1-2-1 B2B meetings. The forum focuses on industrial biotechnology and circular bioeconomy solutions, enabling participants to explore technologies, develop partnerships, identify business opportunities, and accelerate collaborations through licensing agreements, joint ventures, research projects, and commercial partnerships.

More info...



GLOBAL BIOECONOMY SUMMIT 2026

20-21 October 2026

Dublin, IRELAND

The Global Bioeconomy Summit 2026 is a leading international forum bringing together policymakers, industry leaders, researchers, investors, civil society, and stakeholders to advance a sustainable global bioeconomy.

Over two days, participants engage through plenary discussions, workshops, networking, and knowledge-sharing sessions. The Summit explores how bio-based solutions can address climate change, food and energy security, biodiversity loss, and resilient livelihoods while creating economic opportunities and accelerating innovation, investment, partnerships, and sustainable value-chain development.

More info...

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EVENTS

Circular



2ND EUROPEAN BIOECONOMY CONFERENCE

19 November 2026

Brussels, BELGIUM

The 2nd European Bioeconomy Conference brings together policymakers, industry leaders, and innovators to explore Europe's strategic autonomy in bio-based industries and the transition towards a competitive, sustainable bioeconomy.

The one-day conference features high-level panels and interactive sessions addressing sustainable bio-resources, competitive value chains, and global markets. Perspectives from agriculture, food systems, bioenergy, circularity, recycling, and fibre-based textiles aim to bridge EU strategy with industrial implementation and create pathways for collaboration, innovation, and investment.

More info...



EUROPEAN BIOPLASTICS CONFERENCE

1-2 December 2026

Berlin, GERMANY

The European Bioplastics Conference is Europe's leading business and discussion forum for the global bioplastics sector.

Across the two-day programme, around 400 senior decision-makers connect through conference sessions, networking, digital partnering, and an exhibition showcasing innovations. The event brings together producers, brands, manufacturers, policymakers, research institutes, NGOs, and technology providers to explore markets, regulations, sustainability, and circular-economy opportunities. Focusing on bio-based and biodegradable materials, recycling, processing, applications, and end-of-life solutions, EBC26 supports knowledge exchange, partnerships, innovation, and sustainable growth.

More info...

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Circular

EVENTS

PITCH PERFECT AND BOOST THE EUROPEAN BIOECONOMY 2026

30 November & 1 December 2026

Brussels, BELGIUM

The Pitch Perfect and Boost the European Bioeconomy event is an intensive two-day gathering in Brussels designed to link industry leaders with innovative biobased technologies and connect innovators with investors. The event focuses on cross-sectoral pitching, matchmaking, and networking to build lasting partnerships and accelerate cross-border industrial value chains.

With only 42 pitch slots remaining, innovative companies must submit their abstracts by 16 October 2026 to secure a spot. Furthermore, confirmed pitching companies located more than 300 km from Brussels can apply for a €500 travel voucher to offset expenses, provided they submit their application by 10 October 2026. More info...



great things happen in CIRCLEs



and... be part of ours

https://circle-flagship.eu/get-involved/

VISIT https://circle-flagship.eu

info@circle-flagship.eu EMAIL

FOLLOW

PROJECT COORDINATION

Triple W

Aviva Zyskind
TRIPLEW LTD

Gaston Crommenlaan 8, Ghent
Flemish Region 9050, BELGIUM
aviva.zyskind@triplew.co
+32 472417443

etam s.a.
consulting services

Ioanna Antonopoulou
ETAM SA – Consulting Services

Papandreou 5, 71306, Heraklion
Crete, GREECE
iaa@etam.gr
+30 2810 361242

PROJECT COMMUNICATION

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