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# The Prosper project after 18 months, April 2026

This second newsletter is brought to you by the partners of the PROSPER project, which tackles the issue of recycling of bio-based and biodegradable plastics. The project began in October 2024 and will finish in September 2028, and is coordinated by the University of Gent, Belgium.

This periodic report on the project activities is aimed at stakeholders from across industries, policymakers, and a wider audience interested in the sustainability of materials in general.

We refer you to our first newsletter, which can be found [here](#), and to our [website](#), in which there are interviews with project partners, updates, reports, and technical discussions for more detailed information. We would be delighted to hear from you with feedback and suggestions.

## Introduction and update

**Professor Steven de Meester, project Coordinator, with the contribution of Dr Wang Li, University of Gent, Belgium**

Although I have participated in several EU projects before, this is the first time I am coordinating one. It came to me with a mix of ambition, enthusiasm, and some uncertainty, especially knowing that this is a 17 partner Innovation Action, with the shared goal of scaling up bioplastic sorting.

After 18 months, I am very pleased with the progress achieved across the consortium. It has been a rewarding experience to coordinate a project in which all partners not only meet expectations but are also motivated to go further and contribute to meaningful change.

Within WPI, a comprehensive characterisation of bioplastics in household packaging waste streams has been carried out across [three demonstration sites](#) in Spain (FCCMA), Italy (A2A), and France (SUEZ). This work has resulted in a **harmonised dataset on the presence of bio-based plastics**. In addition, SUEZ conducted characterisation at three composting plants in France.

**A key next step was the sorting of bioplastics from real waste streams at scale at the NTCP.** Before this could be achieved, a major challenge was securing sufficient quantities of bioplastic packaging with known material composition for algorithm training and validation. This posed a significant risk to the project. Thanks to the efforts of the entire consortium, and in particular the contributions of Futerro, Novamont, and BIOTEC, adequate material was obtained. This enabled NTCP to **train NIR-based sorting algorithms**, introduce **controlled contamination** into real waste streams, and **demonstrate** the effective sortability of bioplastics. These results, which can be found [here](#), represent a clear step forward, showing that reliable sorting of bioplastics in complex waste streams is feasible. As a next step, PolyPerception will further enhance sorting performance by integrating AI with NIR technology.

Following sorting, progress has also been made in pretreatment and recycling. Current work focuses on **optimising washing processes** for bioplastics to remove contaminants such as dirt and labels, while avoiding excessive material degradation (as can occur in conventional NaOH hot washing). Based on initial washing trials, **mechanical recycling tests have already been conducted at WUR**. These demonstrated the recyclability of PLA and BIOTEC blends through multiple extrusion and thermoforming cycles. In addition, a first prototype product containing recycled PLA, sorted and washed from real packaging waste at scale, has been produced. Achieving this within the first 12 months, ahead of the planned deliverables timeline (M18-M24), reflects the strong commitment of the partners.

Beyond the technical work, a **techno-economic assessment of PLA sorting has been carried out**, providing insights into sorting costs for policymakers and industry stakeholders. The results indicate that PLA does not significantly disrupt existing sorting and recycling processes and can be sorted cost-effectively once its market share exceeds approximately 2.5%, depending on local conditions and scale ([Full article](#)).

**Dissemination activities** have supported knowledge exchange across industry, academia, and policy. Project results have been presented at international conferences, forums, and workshops, as well as through a joint [webinar](#) with other bioplastic projects. These efforts position the project well for the next phase.

Looking ahead, the focus will be on further **improving sorting through combined NIR and AI approaches**, refining pretreatment processes, and scaling recycling technologies from lab to pilot and demonstration levels. In parallel, **market uptake and citizen acceptance** will be assessed through a large survey (approximately 5,000 participants) across six countries: Spain, Belgium, Italy, Germany, the Netherlands, and France. The project will also expand its framework to **address the full end-of-life value chain**, supporting the development of transparent approaches for evaluating bioplastic EPR systems and associated fees.

**A key upcoming challenge will be the demonstration activities in real recycling plants, planned for year three.** Based on the current progress and the commitment of the partners, I am confident that these objectives can be successfully achieved.

Finally, I would like to sincerely thank all partners for their dedication, enthusiasm, and continued effort in making this project a success.

## **Policy scenarios: navigating a fast-changing European policy landscape**

**By David Newman and Roberto Ferrigno, European Bioeconomy Bureau**

Related to the discussion about the technical viability of bioplastics sorting and recycling is obviously a much wider issue: the market for bioplastics

themselves. As we see from the data, **bioplastics are still** a very small fraction of overall plastics, making the sorting and recycling economically difficult.

But how to grow the market when so much is stacked against bioplastics, from EPR fees in some countries which are highly penalizing, to restrictions under the SUP Directive and the Packaging and Packaging Waste Regulation?

PROSPER partners have delivered their views through a long and structured response to the EU consultation on the Circular Economy in November 2025, which can be found [here](#). Among recommendations are those to make specific market pathways for materials made from renewable (biobased) resources in the same way nations have promoted renewable energy- through obligations, targets, and mandates.

Whilst the past six months have brought a wave of legislative changes that indicate that the **bioeconomy is moving from the margins to the center** of Europe's industrial and environmental agenda, **there are still no market mandates to drive production**. Without such mandates, scaling of bioplastics in the EU will continue to struggle.

Below is a brief view of the major policy developments which have influenced the project and its partners.



## **EU Bioeconomy Strategy**

The European Commission in December 2025 formally adopted its **updated Bioeconomy Strategy**, centred on scaling bio-based industries, deploying regional bioeconomies, and keeping biological resource use within ecological limits. A new **Strategic Deployment Agenda** will support regions in building their own bioeconomy pathways,

backed by living labs, pilot actions, and tailored policy assistance. For the analysis of this Strategy undertaken by EBB, see [here](#).

### Bioeconomy Strategy



### EU Soil Monitoring Law

Directive 2025/2360 entered into force on 16 December 2025. Member States have until December 2028 to transpose it and must begin reporting on soil health by December 2031. Key obligations include **monitoring soil condition**, identifying contaminated sites, and addressing erosion, compaction, sealing, and biodiversity loss using common EU methodology. Whilst the Law relates to monitoring, many hope that this will herald greater legislative attention to protecting soil health in the same way European policies attempt to improve water and air quality.

### Soil Monitoring Law



### Bioeconomy Investment Group

The Commission opened a call for interest to join the European Bioeconomy Investment Deployment Group – a new platform to **accelerate investment in the** sector. The initiative follows the [EIB's report](#) highlighting both the **significant** investment potential and persistent financing gaps, particularly for demonstration projects and first-of-a-kind industrial facilities.

[Read the news](#)



## Competitiveness

The Environment Council on 17 March 2026 welcomed the bioeconomy vision for 2040, calling for harmonised legislation and lead market initiatives. Meanwhile, Commission President von der Leyen's [strategic letter of February 2026](#) called for **structural economic strength, a deeper Single Market, and less regulatory fragmentation** – all with direct implications for bioeconomy actors.

For EBB's analysis of the EU leaders' meeting of 12 February, see below.

[EBB's analysis](#)

## Assessing user acceptance and interest in new waste management solutions for bio-based plastics

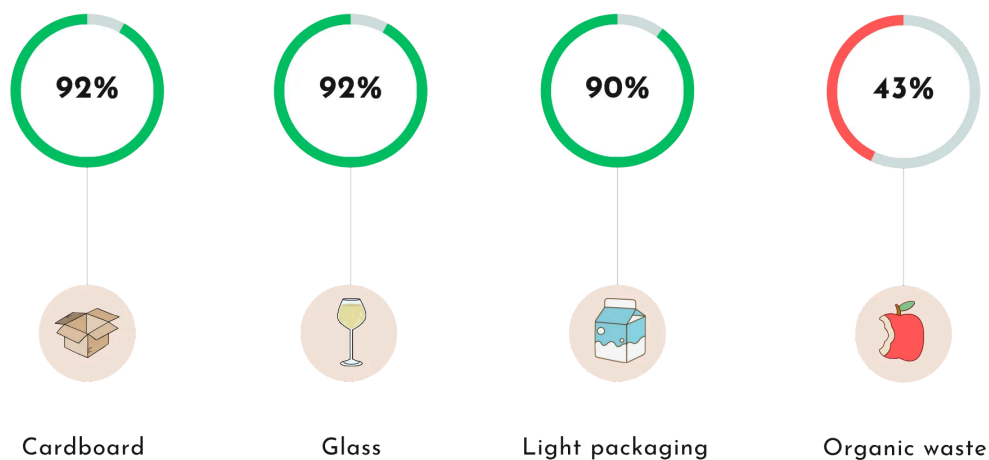
By Adrián Chacón, AIJU Technological Institute

Within the framework of the PROSPER project, a **preliminary study in Spain** (with 438 participants) has been conducted under a task aimed at **assessing user acceptance and interest** in new waste management solutions for bio-based plastics. This activity seeks to collect both quantitative and qualitative data to evaluate sustainability acceptance, perceptions of environmental impact, and the perceived advantages of the proposed solutions compared to existing alternatives for the circular management of these materials. The results presented correspond to the **first evaluation phase** (M12-M24), focused on identifying initial user requirements, and should therefore be considered preliminary.

The initial findings show very high household recycling rates for conventional waste streams, such as paper and cardboard and glass (92%), as well as light packaging (90%). These results confirm a **high level** of citizen engagement and familiarity with established recycling systems.

However, **lower recycling levels are** observed for more specific waste fractions, such as organic waste (43%), along with limited awareness of key certifications for bioplastics, including OK Compost Home (19%) and the Seedling label/EN 13432 (7%). These findings highlight the **need to strengthen both infrastructure and public awareness** regarding newer materials such as bio-based plastics.

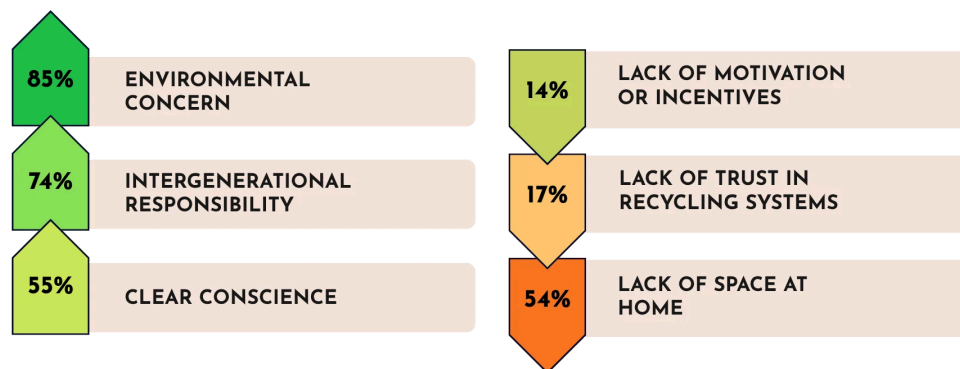
## HOUSEHOLD RECYCLING RATES



In terms of motivation, **recycling behaviour is primarily driven by environmental concern (85%) and intergenerational responsibility (74%)**. This suggests that future communication strategies should focus on environmental benefits and long-term sustainability aspects of bio-based plastics.

The study also identifies **relevant practical barriers**, with lack of space at home clearly emerging as the main obstacle to improved waste sorting (54%). This underlines the importance of designing solutions that are realistic and compatible with current household conditions.

### MAIN DRIVERS AND BARRIERS FOR RECYCLING



Regarding potential new solutions, the idea of introducing a dedicated waste container for bioplastic packaging receives generally positive interest. However, its successful implementation will depend on clear communication, ease of use and system design.

Finally, respondents show a **strong preference for solutions that combine convenience and incentives**, such as deposit-return schemes, shop-based collection points and smart bins with reward systems. While environmental values remain the primary driver, these mechanisms could further enhance participation and improve collection rates.

Overall, these preliminary results indicate that **while household recycling is well** established for conventional waste streams, significant challenges remain for bio-based plastics, particularly in terms of knowledge, infrastructure and adaptation to everyday living conditions.

Following this preliminary phase, the questionnaire will be refined based on these findings, as well as feedback from project partners and the Advisory Board. A large-scale survey will then be conducted across six European countries (Spain, Belgium, Italy, Germany, the Netherlands and France), targeting key population groups including families (with and without children), youngsters and elderly people. **The study will involve 800 participants per country, reaching a total of 4,800 respondents, ensuring robust and representative insights at European level.**

## Mechanical recycling of biopolymers

By **Arnau Fernandez, GCR**

At GCR, we have **successfully** completed laboratory-scale trials on the mechanical recycling of **rigid** fractions of PLA and biopolyester blends.

This research has demonstrated that, by applying pre-processing and purification protocols to the scrap prior to extrusion, at controlled conditions, it is possible to obtain high-quality recycled pellets. The technical validation of these recycled materials was conducted using injection-molded test specimens. The results indicate that the mechanical resistance achieved is comparable to that of virgin products. These results validate the process at laboratory scale, allowing us to plan the transition to an industrial environment in the coming months.

In the coming months, our R&D efforts will shift as well toward the recycling of flexible fractions at lab scale. We aim to **develop the specific laboratory pre-processes** required for the successful mechanical recycling of flexible biopolymer waste, following the same rigorous standards of quality and performance established for rigid materials.

## Communication and Dissemination

PROSPER partners EBB handle the communications and dissemination aspects of the project, managing the website ([www.prosperbioplastics.eu](http://www.prosperbioplastics.eu)), newsletters, social media, press releases etc.

There have been some interesting results from the first 18 months to highlight.

Traditional printed media rarely take up stories. EBB talks to several media outlets but only in a few cases is news relating to research considered of interest to them. Visits to the website are almost always related to the publication of a specific research result - few visitors look at the website to explore the project in general, they need specific reasons to visit.

Social media has mixed results. For example many people watch our videos on YouTube but nobody registers; we have a great following on LinkedIn, more views than estimated, but less registrations to the newsletters and posts than predicted. It shows that audiences have increasingly limited attention spans. TikTok and Instagram have redefined our ability to concentrate for more than a few seconds.

**This cartoon sums up how we focus only for very short times thanks to social media.**



The broadcasting which CBE JU does of our stories is a great help in reaching wider audiences (thank you!)

## Advisory Board

The Prosper project has an Advisory Board whose members you can see at this [link](#). They are an authoritative and informed bunch of professionals. They know the waste and plastics industries intimately. So far, we have met together twice, once online and once in person during our workshop at the NTCP center in the Netherlands. No substantial criticisms of the

project emerged, which is reassuring, but many helpful suggestions did. For example, related to public outreach questionnaires, certification, toxicity analyses, cost/benefits and so on. In general we all found it useful to have a serious bunch of people able to look from the outside in because it avoids complacency and gives different perspectives to the more research-oriented professionals undertaking the project itself.

## News

### Prosper partners at World Recycling Day 2026



**18 March 2026**

On World Recycling Day, Prosper participated in the conference organised by POLYREC, attended by over 200 industry experts and academics both in person and online. The event brought together leading voices in plastic recycling innovation, providing an ideal setting to share the project's latest findings with a broad and engaged audience.

Prosper's presentation, delivered on behalf of the consortium by Adeline Dupas (SUEZ), focused on the characterisation of plastic waste streams containing bioplastics from French sorting centres and composting facilities. The talk highlighted the growing significance of bioplastic waste in the recycling chain and the need for efficient sorting and recycling solutions specifically tailored to these materials.

## Women in Prosper: voices from the team

To mark the International Day of Women and Girls in Science, Prosper turned the spotlight on the women who make the project's research possible. In a short video, members of the team share their personal journeys in science, reflect on what stronger female representation in STEM means to them, and offer their vision for a more inclusive research community. Diverse perspectives are not simply a matter of fairness - they strengthen the quality of research, drive innovation, and help ensure that scientific outcomes serve society as a whole.

Watch the video

## Missed our webinar?

**The recording and presentations are available on our website**

On 27 November 2025, Prosper co-hosted the webinar "Bioplastic Recycling - Policy Context, Economy, and Technologies" together with sister projects MoeBIOS and ReBioCycle. The event brought together participants from industry, research, policy, and civil society for an in-depth and wide-ranging discussion on the future of bioplastic recycling.

If you were unable to join live, the full recording and all speakers' presentations are now [available on the Prosper website](#).

Watch the recording



March 2026

## Consortium Meeting in Heerenveen

In March 2026, the PROSPER consortium gathered in Heerenveen, the Netherlands, at the headquarters of NTCP for a meeting that combined technical exchange, stakeholder dialogue, and a visit to NTCP's industrial-scale testing facilities, where activities for the PROSPER project are carried out. As Europe's first independent test centre with industrial-scale facilities for sorting and washing plastics, NTCP plays a key role in advancing innovation and research to support a circular plastic value chain. The visit offered partners a valuable opportunity to observe first-hand NTCP's data-driven and practice-oriented approach, which helps translate research outcomes into real-world applications.

A key moment of the meeting was the exchange with members of the PROSPER Advisory Board, whose diverse expertise and feedback provided valuable insights to support the project's progress and future direction.

October 2026

## Next Consortium Meeting

The partners are due to meet at the offices and research centre of SUEZ near Paris in October 2026, which will mark the halfway stage of the project.



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**Prosper Bioplastics**

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