LIFE GRAPhiREC

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NEWSLETTER

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Introducing GRAPhiREC: giving graphite a second life

Welcome to the December issue of the GRAPhiREC Newsletter!

Welcome to the December 2025 issue of the GRAPhiREC newsletter. This edition captures the key messages from our Rimini outreach event at Ecomondo (4 – 7 November), sets out how partner projects strengthen the wider circular battery ecosystem, and shares highlights from Brussels during Raw Materials Week.

Whether you work in industry, policy, or research, you'll find clear takeaways on why recycled, specification-ready graphite matters and how GRAPhiREC is turning pilot work into comparable, auditable results for European offtakers.

EMPOWERING EUROPE'S BATTERY RECYCLING INDUSTRY

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First GRAPhiREC Outreach Event

At Ecomondo in Rimini, GRAPhiREC opened its first outreach event with a clear message: recycled, specification-ready graphite must become a dependable stream for Europe's battery industry.

The first section started with a keynote presentation by Fabrizio Corti, external expert to ECGA, who explained how fast-rising EV demand is transforming graphite from a background material into a supply risk. His call to action was straightforward: accelerate the recovery, reconditioning and regeneration of graphite from end-of-life Li-ion batteries so that high-quality secondary material can sit alongside primary supply.

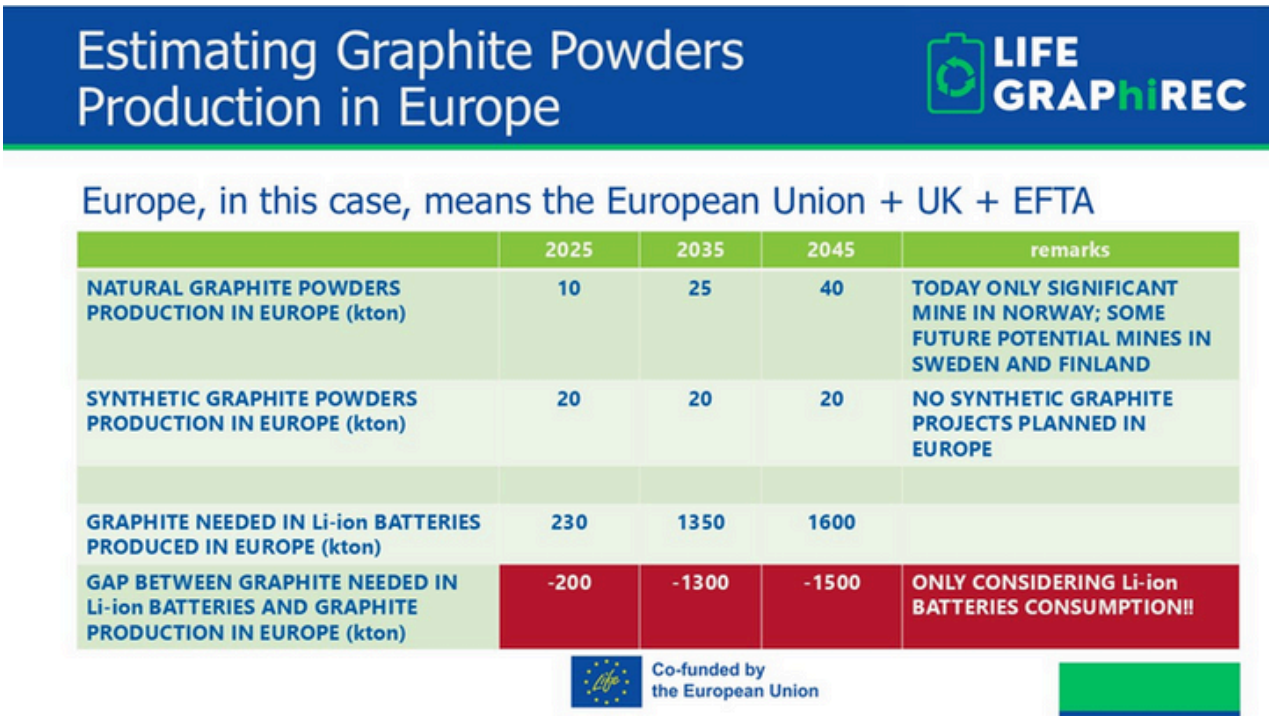
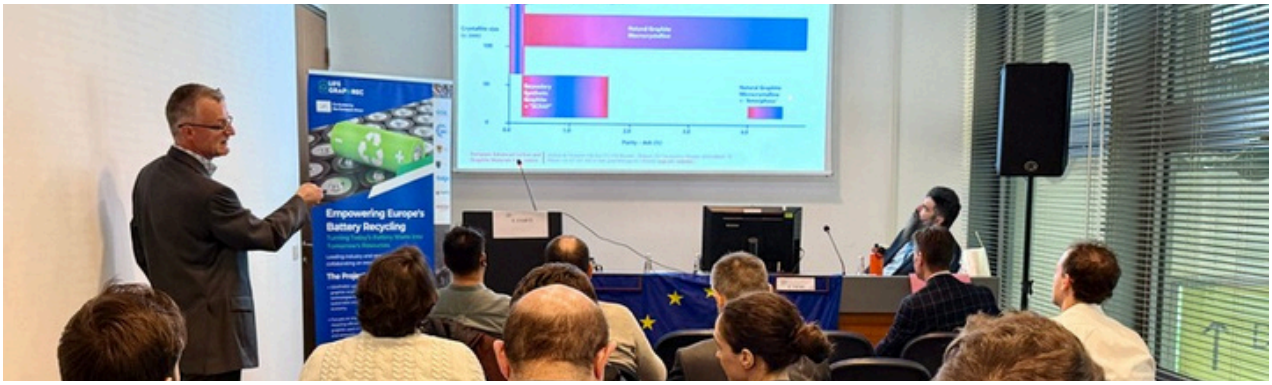


Figure 1 – Europe's graphite gap. Production versus need in Europe – why secondary graphite must scale alongside primary supply.





That direction is reinforced by the Commission's harmonised methods for calculating and verifying recycling efficiency and material recovery (adopted on 4 July 2025), which give recyclers and buyers a common basis for acceptance. It also aligns with graphite's strategic status under the Critical Raw Materials framework.

Enrico Fiori, representing ORIM, set out what GRAPhiREC is doing about it: building practical routes to return high-quality graphite to the value chain, with evidence packages that downstream users can audit. The project's work covers input characterisation, purification and post-processing, battery prototyping, and communication/exploitation – with results prepared in line with the new EU verification methods so data are comparable across Member States and offtakers.

Focusing on the ORIM line, Enrico Fiori outlined the Li-ion route from anode production scraps through pre-treatment (including copper removal) and hydrometallurgical purification, followed by shaping/thermal steps with partners ahead of cell testing. The emphasis is on very low residual metals and controlled morphology/surface state so the material can be re-qualified efficiently for anode use.

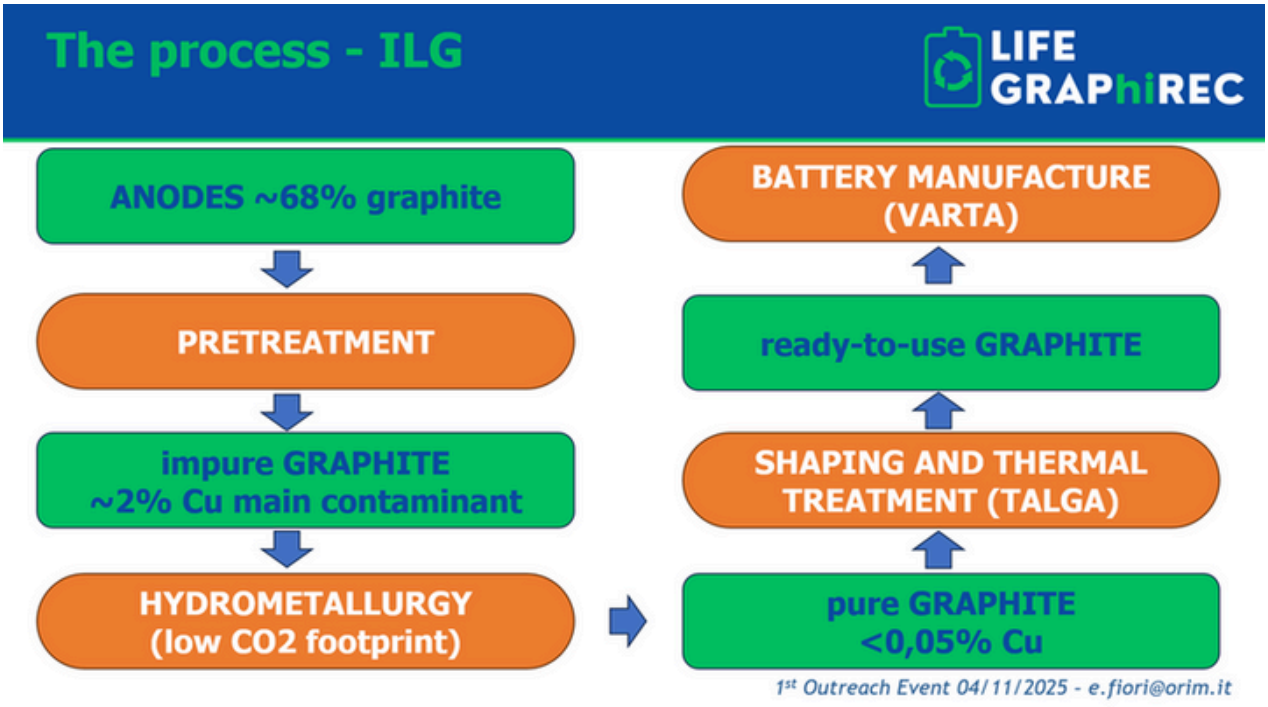


Figure 2 – ORIM pilot flowsheet. From Li-ion anode production scraps to low-contaminant graphite ready for shaping/thermal steps and re-qualification.

Turning to SIMA, Claudio Milanesi presented the alkaline-battery route, redesigned to prioritise graphite quality. In line with the Steering Committee decision, the flow now applies a hydrochloric-acid regime to help limit residual contaminants and preserve surface characteristics important for anode behaviour.

At the end of the first session, Matteo Falasconi (IBS Consulting) mapped financing paths to move from pilot to deployment. At the EU level, the Innovation Fund supports large clean-tech demonstrations; EIT RawMaterials KAVA Upscaling backs TRL-5–8 upscaling with a market-entry focus; and the LIFE Programme offers dedicated lines for circular economy and quality of life projects. His practical takeaway: assemble auditable technical and environmental evidence, show a credible offtake path, and match each instrument's TRL, timing and budget to the step you want to fund.



In the second part of the event, we invited five EU initiatives to show how their work connects with graphite circularity. Together, they painted a clear picture: better dismantling, smarter recovery routes, robust traceability and strong stakeholder engagement all help secondary materials (including recycled graphite) flow back into European supply chains.

From the EV-battery side, BATRAW (presented by Dr Angél Manuel Escamilla, LEITAT) showed how semi-automated pack dismantling links to pilot-scale recycling and digital traceability, so feedstock is prepared safely, and data can follow materials across the chain. The project's aim is practical: recover critical raw materials, prove the pilots, and make re-use easier with a battery-passport approach.



FREE4LIB (presented by Mattia Duranti, FBK) complements this with quicker dismantling, efficient pre-treatments and recovery processes, and a battery-passport methodology to make results auditable. For GRAPhiREC stakeholders, the value is clear: better upstream data and pre-processing mean cleaner, better-documented inputs for downstream qualification.

Zooming out beyond batteries, INSPIREE (presented by Laura Mascheretti, Erion) is building Europe's first industrial-scale plant to recover rare earths from NdFeB magnets; a reminder that circularity succeeds when industrial design, not just lab chemistry, is in place. That lesson carries across to graphite: success hinges on plants, partnerships and proof that outputs meet market spec.



Staying with cross-sector learning, LIFE SIRCULAR (presented by Prof Francesco Vegliò, UNIVAQ) targets high-purity silicon and silver from end-of-life PV panels. Its multi-step route – physical concentration plus selective leaching – echoes what buyers expect from any secondary input: purity, consistency and traceability that translate into performance.

Finally, BASTILLE (presented by Veronika Sochorová, ECGA) brought the policy and society lens: stakeholder engagement, national-level barriers and enablers, and how clear messaging helps technical results land with decision-makers. It's a useful mirror for GRAPhiREC: the data must be strong, but so must the pathway to acceptance and use.



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To round off the session, we looked at communication, dissemination and LIFE visibility as the bridge between lab progress and real-world uptake. The approach is straightforward: turn complex results into short, reusable materials (one-page briefs, clear charts, partner-ready posts), keep messages consistent about why quality-assured recycled graphite matters, and engage the right audiences first (industry, policymakers, peer projects; the public via LinkedIn and partner webpages). We also make sure our materials correctly acknowledge EU support in line with Commission guidance, so evidence is not only accessible and trustworthy, but also fully compliant.

Thank you to our speakers and to all participants for a lively, insight-rich session in Rimini.



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Antimony Day 2025 and Raw Materials Week: our Brussels highlights

GRAPhiREC took part in Day 1 of Antimony Day 2025 in Brussels, an official side event of the European Commission's Raw Materials Week. Day 1 focused on "Securing strategic value chains: the role of antimony, gallium, graphite and lithium", bringing policymakers, industry and researchers together around Europe's supply needs. We were on site to engage with stakeholders and exchange insights.

Our outreach continued through Raw Materials Week (17–21 November), ensuring graphite's strategic importance – primary and secondary – stays on the radar of decision-makers and technical audiences alike. The Commission's core programme ran from 18 to 20 November, providing further touchpoints on critical raw materials policy and industry practice.



Stay connected!

Follow us on LinkedIn to stay up to date on our technical progress, results, and upcoming events. We'll also be sharing behind-the-scenes updates from our pilot plants and technical working groups.

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