

An aerial photograph of a winding asphalt road cutting through a dense, lush green forest. The road curves from the top right towards the bottom left. The trees are vibrant green, with some yellowing leaves visible, suggesting a late summer or early autumn setting. The overall scene is bright and natural.

POSITION PAPER

EU Bioeconomy Strategy

April 2026

About Greenovate! Europe

Greenovate! Europe (G!E) is a unique European network, comprised of organisations along the innovation value chain – from idea generation to development and dissemination – including research and technological centres, specialised clusters, innovation consultancies, public agencies, and communication, dissemination and exploitation experts, all dedicated to sustainable innovation.

Our vision is to be Europe’s leading inclusive eco-innovation network and to be the preferred partner of the European sustainable innovation system. Our mission is to work on sustainable innovation in Europe, promoting the transition to climate neutrality, energy independency, bioeconomy, and a resilient economy for an inclusive society.

Executive Summary

On 27 November 2025, the European Commission released the [New Strategic Framework for a Competitive and Sustainable EU Bioeconomy](#). Based on our experiences in HEU projects, we make the following key recommendations to ensure that the bioeconomy drives real and lasting innovation impact.

- **Strengthen governance and close regional gaps:** National bioeconomy hubs, particularly in Central and Eastern Europe where strategies are less developed, must receive permanent funding to sustain stakeholder engagement, policy co-creation, and knowledge transfer.
- **Establish targets to unlock investments at scale:** Clear and quantified targets for feedstock production and end-use uptake provide investment certainty, reduce market and coordination risks. By setting binding objectives, the EU can accelerate the transition from pilot projects to large-scale deployment.
- **Secure sustainable and circular biomass supply:** Policy must prioritise secondary biomass streams over primary feedstocks. Binding mandates for bio-based materials should reflect this cascade principle, while support for processing infrastructure and cross-border market development must be tailored to value-chain maturity.
- **Build lead markets through demand-side instruments:** Biobased markets will not scale without intervention. The EU should introduce mandatory bio-based content requirements where supply is sufficient, elevate Green Public Procurement from voluntary guidance to a strategic market-making tool, and improve consumer trust through clear labelling and certification.
- **Invest in knowledge, skills, and partnerships:** the bioeconomy transition demands a workforce equipped with technical, entrepreneurial, and systems-thinking competencies. Regional demonstration hubs, digital knowledge platforms, and structured cross-regional and international collaboration are proven vehicles for replicating innovation at scale.

Introduction: Delivering on the EU Bioeconomy Strategy

On 27 November 2025, the European Commission released the [New Strategic Framework for a Competitive and Sustainable EU Bioeconomy](#). With a value of up to €2.7 trillion in 2023 and employing 17.1 million people (around 8% of EU jobs), the bioeconomy already contributes significantly to job creation and economic growth in Europe. Realising its full potential, however, requires commitment and collaboration between industry, research, and policy actors across Europe.

As a Europe-wide network of eco-innovation experts spanning the research and innovation value chain, G!E works at the forefront of implementing the objectives of the EU Bioeconomy Strategy on the ground. From valorisation of secondary biomass for innovative bio-based materials, fuels, and fertilisers to the development of bottom-up approaches for national bioeconomy strategies, the bioeconomy is one of our network's priority areas. With the publication of the new strategy by the Commission and recent approval of [Council Conclusions](#), G!E in consultation with its members, are presenting key recommendations to ensure that the bioeconomy drive real and lasting innovation impact.

Improving governance, strategies and incentives to enable scaling of innovation and investment

Over the past decade, the bioeconomy has clearly demonstrated its capacity to create new economic opportunities while supporting sustainability and circularity. However, moving to **large-scale deployment** requires de-risking investments, removing regulatory and non-regulatory barriers, facilitating market entry, and **strengthening the market for bio-based solutions**. It also requires strengthened governance frameworks that enable coordination across policy areas, improve coherence between EU and national measures, and provide transparent monitoring to ensure that deployment remains aligned with sustainability objectives.

Stable and well-functioning governance mechanisms - including inclusive stakeholder engagement, bottom-up approaches for national strategies and science-based monitoring - are essential to guide this transition and stimulate demand for bio-based products. Equally important is directing support toward technologies and applications that generate **the highest value added from Europe's limited biological resources**. By doing so, both economic competitiveness and environmental sustainability can be maximised, **benefiting communities, citizens, businesses, and the climate alike**.

Recommendation: Provide financial support for permanent national structures that foster coordination, stakeholder engagement, and open innovation to implement the EU Bioeconomy Strategy at national and regional levels

National bioeconomy hubs can serve as a permanent and bottom-up driving force of national level bioeconomy, providing a platform for dialogue between industry, research, policy-makers and society. They play a critical role in **Central and Eastern Europe** where national and regional bioeconomy strategies remain underdeveloped and stable conditions for investment are still lacking. The [CEE2ACT](#) project has demonstrated that Hubs provide a platform for dialogue between industry, research, policy makers and society, which **can stimulate innovation and accelerate the transition to a competitive and sustainable bioeconomy**. Recognition in EU and national strategies would allow these hubs to expand and continue facilitating stakeholder engagement, knowledge transfer and co-creation of policies.

The 10 CEE2ACT Hubs **stressed the need to establish a clear business case** that illustrates the benefits of bioeconomy to attract private sector involvement and drive participation in bioeconomy projects. Dedicated financial support should be made available to create and operate these structures permanently, ensuring they can continue facilitating stakeholder

engagement, knowledge transfer and policy co-creation, and build on their demonstrated impact rather than reinventing coordination capacity through successive EU funded projects.

Recommendation: Give particular attention to the development of national and regional bioeconomy strategies in Central and Eastern Europe

Several Central and Eastern European countries have yet to adopt comprehensive bioeconomy strategies, creating uncertainty that can hinder investment and innovation. **National and regional strategies** should integrate the bioeconomy into economic and industrial plans, highlighting its economic and sustainability benefits, while fostering collaboration through partnerships, innovation hubs, and living labs to bridge research and practical application. Access to financing can be improved by raising awareness of funding opportunities, expanding advisory services, and leveraging blended finance to attract private investment. Accelerating knowledge transfer via demonstration hubs, industry-led training, and digital learning will build expertise in bio-based technologies. Streamlined governance, cross-ministerial coordination, simplified regulations, and pilot regulatory sandboxes can further enable scale-up.

Recommendation: Establish clear and binding quantitative targets to unlock investment at scale

Scaling bio-based solutions from innovation to market requires **explicit, measurable targets for feedstock production, processing capacity, and uptake in end-use sectors**. Experience from the Dutch National Approach to Biobased Construction (NABB) demonstrates that clear, quantified targets provide investment certainty, reduce market and coordination risks, and encourage private investment. By setting binding objectives, the EU can accelerate the transition from pilot projects to large-scale deployment, ensuring that resources are used efficiently, value is maximised across the bioeconomy, and competitiveness and sustainability are strengthened across European value chains. The **NEXRUR** project, which is exploring the drivers of rural innovation and business creation, works on **monitoring environmental, social and economic performance** to respond directly to this need. While in its early stages, it suggests that the Bioeconomy Strategy should promote common frameworks, indicators and tools that allow innovative bioeconomy businesses to demonstrate impact, reduce perceived risk, and attract long-term investment - ensuring that value generated remains in rural regions.

Recommendation: Develop financial incentives to encourage land manager engagement in carbon farming, such as formalised carbon credits systems

Scaling up carbon farming across Europe requires robust mechanisms to reward land managers for climate-positive practices. The **EU Carbon Removal Certification** system provides a **strong foundation to formalise carbon credit schemes**, ensuring that measurable and permanent carbon removals are recognised and financially compensated. By linking land management practices to **clear and verifiable carbon credits**, farmers and landowners can be incentivised to adopt regenerative practices, invest in long-term soil health, and contribute to EU-wide carbon sequestration targets. Financial support mechanisms - such as result-based payments, subsidies for infrastructure, and access to carbon markets - are essential to de-risk investments and encourage wider uptake.

G!E projects such as **MarginUp!** demonstrate that even marginal or low-productivity lands can become valuable sources of biomass and soil carbon storage while delivering biodiversity and broader ecosystem benefits. Additional analysis from **GO-GRASS** stakeholders and user data also highlights that the successful deployment of bio-based innovations depends not only on technological readiness and value chain development, but also on **institutional trust**. Across several grass-based product systems, adoption was strongly linked to affordability, performance validation, and credible sustainability information. Strengthening transparency, certification, and monitoring infrastructures could therefore further support the market uptake of bio-based innovations.

Recommendation: Create incentives for farmers to increase carbon capture in grasslands at a feasible and understandable administrative level

The GO-GRASS project has shown that innovative grassland valorisation - such as the production of biochar and long-lasting bio-based products - can simultaneously create economic opportunities and increase carbon storage in soils and products. To replicate and scale these approaches, **farmers require practical incentives** that are easy to implement and do not impose complex administrative burdens. **Policy measures** could include simplified result-based payment schemes for soil carbon gains, technical support for biochar production and soil amendments, and guidance on integrating grassland carbon practices into existing farm management plans. By aligning financial incentives with measurable carbon outcomes, farmers can adopt carbon-enhancing practices more efficiently while contributing to the EU's climate neutrality objectives and strengthening rural economic resilience.

Case study: GO-GRASS - Unlocking the Potential of Grassland Biomass (2019-2024)

The **GO-GRASS** project, coordinated by the [Leibniz Institute for Agricultural Engineering and Bioeconomy \(ATB\)](#), focused on valorising European grasslands by developing circular business models around grass biomass. The project demonstrated **innovative pathways to convert grass residues into bio-based products, including biochar, organic materials, and long-lasting goods, while increasing soil carbon storage**. Across demonstration sites in Denmark, Germany, Sweden, and the Netherlands, GO-GRASS engaged farmers, SMEs, and local stakeholders to implement sustainable solutions. The project highlighted how **integrating environmental benefits with economic opportunities encourages adoption by local actors**. GO-GRASS showcased the role of biochar production in carbon sequestration, linking rural innovation to EU climate goals and the emerging carbon farming framework.

Ensuring sustainable biomass value chains

G!E supports the EU Bioeconomy Strategy's priorities to reduce reliance on primary biomass by making stronger use of secondary feedstocks, while ensuring resilient and sustainable ecosystems and value chains. Achieving this requires a **systemic approach that safeguards biodiversity, soil health, water resources, and carbon sinks**, and ensures that biomass use is efficient, climate-positive, and socially beneficial. **A sustainable biomass strategy must consider the full value chain** - from feedstock availability and processing capacity to market integration - and balance environmental, economic, and social objectives.

In particular, the transition towards a circular bioeconomy depends on prioritising secondary biomass streams, such as agricultural residues, by-products, organic waste, and industrial side flows. At the same time, **policies must support the development of value chains at different maturity levels**, enabling innovation, investment in processing infrastructures, and access to cross-border markets. Complementary measures such as targeted incentives, green public procurement, and CAP eco-schemes can strengthen market uptake and improve economic viability for primary producers and new market actors.

Recommendation: Binding mandates for biomaterials in Europe prioritising secondary biomass over primary biomass

A key priority is to promote the cascading use of resources by **prioritising secondary biomass streams before mobilising additional primary biomass**. **Binding requirements** for biomaterials should clearly encourage the use of residues, by-products, and organic side streams over primary raw materials. This approach would **stimulate innovation in technologies that transform waste into valuable products**, strengthen circular markets for bio-based materials, and

reduce pressure on natural ecosystems. G!E projects such as [FertiCoverry](#) demonstrate the **potential of recovering nutrients from secondary biomass** streams - including manure, wastewater and biowaste - to produce bio-based fertilisers. By identifying and assessing the best available nutrient recovery technologies, the project highlights how secondary raw materials can substitute primary resource inputs while improving nutrient circularity and soil health.

Recommendation: Tailor policy support to value-chain maturity by linking R&D with industry, enabling biomass processing infrastructures, and facilitating cross-border market expansion

Policy support should adopt a value-chain-oriented approach, recognising that **technical feasibility alone does not ensure market uptake**. Economic viability depends on stable demand, adequate processing infrastructure, and the ability to pool supply at competitive scale, while high upfront costs for specialised machinery or local processing facilities remain a barrier for farmers and early actors. **Complementary measures** - such as targeted incentives, green public procurement, and CAP eco-schemes - can help create real market demand and strengthen circular resource flows. Support should be tailored to the maturity of the value chain: early-stage value chains require frameworks linking R&D, industry, and feedstock suppliers; emerging chains need investment and risk-sharing for processing infrastructure; established chains benefit from measures that facilitate cross-border market expansion. Policies should also promote sustainable valorisation of side-streams and bio-based nutrients, enhancing circularity and strategic autonomy.

Case study: MarginUp! - Transforming Marginal Lands into Climate-Resilient Value Chains (2022-2026)

The [MarginUp!](#) Project, coordinated by G!E member [ATB](#), demonstrates how marginal and low-productivity lands **can be converted into productive, biodiversity-friendly biomass sources for bio-based value chains**. Implemented across seven regional “use cases” in Europe, Argentina, and South Africa, the project **engages local communities, researchers, and industry partners to increase soil health, biodiversity, and carbon capture, while creating new economic opportunities**. MarginUp! shows that integrating sustainability with practical land management and value chain development can simultaneously deliver climate, ecological, and socio-economic benefits. Its multi-stakeholder workshops and regional pilots provide a replicable framework for carbon farming and rural bioeconomy innovation.

Building new lead markets for bio-based materials and technologies

Stable regulatory frameworks, de-risking instruments, and tailored support for SMEs are essential to accelerate market building and industrial uptake in EU countries, where innovation potential exists but financial and knowledge barriers still hinder scaling. To develop markets the EU Bioeconomy Strategy should explicitly establish **binding demand-side instruments** such as regulatory steering and public procurement as market-makers. This can be done for example by introducing **embodied carbon requirements, minimum bio-based content, and harmonised sustainability criteria** for bio-based materials. At the same time, scaling up bioeconomy markets requires the development of **integrated value chains** with processing infrastructure, feedstock supply, and end use markets functioning in a coordinated way.

Recommendation: Strengthen market demand side instruments including mandatory bio-based content requirement Green Public Procurement and labelling

Biobased markets will not scale without appropriate demand side interventions. The EU must embed biobased products more systematically into legislation through enabling measures calibrated to market maturity, including targeted **incentives and awareness measures** where market are nascent and **mandatory bio-based content requirements** where

sufficient supply exists. Together, these incentives would provide the regulatory certainty needed to stimulate the market. Nearly **30% of all public spending** in the EU is subject to public procurement requirements and procedures. **Green Public Procurement** should be elevated from a voluntary practice to a strategic market making to unlock high-impact technology, supporting both early-stage development and scale-up. Evidence from the [HOOP](#), [InvestCEC](#) and other G!E supported initiatives demonstrates that public procurement obligations are crucial to creating and building markets for bio-based products and circular economy business cases, supporting early-stage technology and scale up. In addition, many consumers are unfamiliar with the **benefits offered by bio-based products**. This gap must be addressed through clearer messaging and labelling systems that build trust and encourage behavioural change. It is essential to increase consumer confidence and support certification schemes that help bioproducts gain market traction.

Recommendation: Develop integrated value chains as the foundation for scaling bioeconomy markets

Scaling bioeconomy markets requires that feedstock supply, processing infrastructure and end-use markets develop in a coordinated and mutually reinforcing way. Where these elements are misaligned market development stalls regardless of demand signals. EU policy must therefore treat **value-chain integration as a precondition** and support integrated value-chain development. This means designing market instruments that work across the full value chain simultaneously from biomass production on marginal lands to processing, market access, and customer engagement. In particular, EU policy should support **long-term off-take agreements** that provide revenue certainty to unlock investments, **risk-sharing mechanisms** that distribute financial exposure across partners, and **aggregation models** that allow farmers and SMEs to engage collectively with value chains they could not access individually. Together the instruments build the market architecture that allows bioeconomy sectors to reach scale and ensure that the bioeconomy delivers simultaneously on competitiveness, circularity, and rural resilience.

Recommendation: Use regulatory coherence as a market-making instrument

Bioeconomy markets often fail to form not because demand is weak but because **contradictory regulation** makes investment and diversification too uncertain to pursue. At EU level, some sectors like bio-based materials for construction are stalled by incoherent regulations. The construction sector is simultaneously being pushed toward decarbonisation by the [EU Energy Performance of Buildings Directive](#) while bio-based materials, among the most effective tools for reducing embodied carbon, face **standards and certification frameworks** that are not designed for them. The EU should therefore treat policy coherence as an active market-making instrument, targeting the fault lines where incoherence most suppresses market formation. The [INBUILT project](#) illustrates this directly, its innovative materials are currently operating **outside the scope of current standards**, yet the results achieved could be used to adapt the regulations to enable market entry.

Case study: [InvestCEC](#) – developing a replicable model for local circular economy projects (2022-2025)

The InvestCEC project provided **advisory services** to circular economy projects in Klagenfurt, Austria, including the development of a **€20M investment fund** designed to de-risk the uptake of innovative circular solutions in the city (to be launched once cornerstone investor is secured). Public procurement emerged as one of the most significant barriers encountered, affecting both SMEs seeking to collaborate with public authorities and public bodies trying to adopt innovative solutions.

Stadtwerke Klagenfurt, the project's public sector partner, highlighted that innovative circular solutions cannot compete on a "**best price**" basis against established conventional alternatives. Existing procurement frameworks push evaluators toward lowest-cost criteria, structurally disadvantaging emerging solutions regardless of their sustainability performance. While tools such as **EU Green Public Procurement criteria** provide a foundation for integrating sustainability into procurement decisions, their voluntary nature limits their impact.

Strengthening knowledge transfer and partnerships

Implementing the bioeconomy transition will require a **broad set of competencies** including not only technical expertise in engineering, green chemistry, and bioprocessing, but also data and value chain analysis, business and marketing strategies, systems thinking, entrepreneurship, and regulatory expertise. Fragmented knowledge systems and weak cross-regional collaboration remain among the most persistent barriers for bioeconomy. To implement the strategy effectively, the EU needs must foster collaboration and knowledge transfer to increase the accessibility of key technical knowledge.

Recommendation: Scale tested, community-led business models through real-life experimentation with stakeholders

NEXRUR demonstrates how years of conceptual and analytical work on rural entrepreneurship initiated in RUBIZMO can be translated into **tested, scalable business models**. By designing and testing bottom-up, community-led models in real conditions across over 20 EU and Chinese case studies, NEXRUR provides concrete evidence on how innovation can be deployed at scale. The EU Bioeconomy Strategy should support such **living laboratories and innovation networks**, where business models, governance arrangements and sustainability performance are tested, monitored and refined before wider replication. Furthermore, research has shown that involving communities in the management and deployment of biological local resources can improve their usage and long-term sustainability.

The **RUBIZMO** project demonstrated that many emerging bioeconomy opportunities rely on **newly established enterprises** that translate research results into concrete business activities. Successful uptake depends on strong links between **research organisations, entrepreneurs and networks** to enable technology transfer, knowledge exchange and the creation of new value chains connecting renewable resources and ecosystem services to markets. EU instruments should therefore strengthen integrated pathways from R&D to entrepreneurship, rather than treating research, innovation and deployment as separate stages.

Recommendation: Embed widening, skills and knowledge transfer as core pillars of bioeconomy governance

The success of the bioeconomy transition depends on the **availability and accessibility of technical knowledge**. A key challenge is the mismatch between the current workforce and the skills required, necessitating transformation and re-skilling to support the development of emerging bio-based value chains.

Closing this gap requires action at multiple levels. At the system level, **regional bioeconomy demonstration hubs**, where industry players, researchers and policy makers can develop, test, and refine technical solutions, provide the needed infrastructure. At the institutional level, public authorities, schools and the scientific community should better align **education, training, and reskilling measures** with emerging bio-based value chains, ensuring that workforce development, innovation, and regional cohesion progress together. Finally, at the access level, investing in **digital knowledge-sharing platforms** and shared infrastructures can further expand access to practical guidance, ensuring that expertise on bio-based solutions reaches all relevant actors.

Recommendation: Foster cross-regional networking and collaboration across bioeconomy value chains

The bioeconomy stakeholder community is seeking better coordination, collaboration, and support structures which can be delivered through **innovation clusters**. The EU should actively promote **cross-regional and cross-sector collaboration**, enabling regions at different maturity levels to co-develop, test, and scale bio-based solutions. Instruments such as cluster–cluster cooperation, interregional partnerships, and innovation ecosystems can effectively connect agriculture, forestry, waste, industry, and biotechnology actors along the entire value chain.

Initiatives like [BIO-INSPIRE](#) demonstrate how structured networking can accelerate replication, reduce fragmentation, and strengthen Europe's bioeconomy competitiveness. As demonstrated also in CEE2ACT, strengthening information and knowledge exchange among the CEE countries through national hubs is key to accelerating the implementation of the circular bioeconomy across these countries. The EU should support regional and national authorities to align their bioeconomy strategies and use funding programmes to support **their regional bioeconomy innovation clusters**.

Recommendation: Embed international knowledge exchange in bioeconomy policy

Global collaboration can significantly support the successful implementation of the EU Bioeconomy Strategy. The **NEXRUR** project's mirrored EU - China approach demonstrates the value of testing and adapting rural bioeconomy business models across different socio-economic, environmental, and cultural contexts. By developing and analysing parallel pilot cases in Europe and China, the project highlights how **knowledge exchange can accelerate learning on sustainable biomass use, circular value chains, and innovative rural business models**. Such cooperation also helps identify transferable practices and policy frameworks that can strengthen the resilience and sustainability of bio-based systems in different regions.

To build on these insights, the EU should further strengthen **international research and innovation partnerships** and promote systematic knowledge sharing between regions. Established networks and institutions - such as ELARD in Europe and CAAS in China, can play an important role in facilitating dialogue between policymakers, researchers, and rural stakeholders. Embedding international knowledge exchange mechanisms within bioeconomy policy frameworks would support mutual learning and help adapt successful approaches to local contexts.

Case study: CEE2ACT – Enabling knowledge exchange and capacity building (2022-2025)

[CEE2ACT](#), coordinated by G!E member GEONARDO, aimed to empower countries in Central Eastern Europe and beyond (Bulgaria, Croatia, Czech Republic, Greece, Hungary, Poland, Romania, Serbia, Slovakia and Slovenia) to develop circular bioeconomy strategies and action plans through innovative governance models.

Using a **bottom-up approach**, the project promoted knowledge exchange, informed decision-making processes and societal engagement, drawing on the experience of partners from contributing countries (Austria, Germany, The Netherlands, Belgium, Spain, Finland, Sweden). The project supported **knowledge transfer** by connecting bioeconomy stakeholders and policy makers from Central, Eastern and Western European countries. GEONARDO led the development of digital tools, including inventories of best practices and e-learning modules, to strengthen national capacities via the **CEE2ACT National Bioeconomy Hubs**.



About us

Greenovate! Europe is a not-for-profit network of organisations dedicated to sustainable innovation. Together we develop sustainability projects and provide innovation support services to researchers, companies and policy-makers.

Our members span the research and innovation value chain – from research centres through to industrial clusters, innovation consultants to communication and engagement agencies.

