

RDE is a strategy + delivery partner for EU-funded innovation programmes: we shape concepts, build consortia, and translate policy priorities into implementable, interoperable, and procurement-ready solutions.

## Where we contribute

- Programme & workplan design: coherent logic, governance, deliverables, timelines
- Stakeholder orchestration: multi-country alignment, facilitation, handovers

## Evidence & methods

- Monitoring & KPI frameworks: reporting methods, QA, comparability across regions
- Impact logic: policy/market relevance, socio-economic framing, uptake conditions

## Deployment & scale

- Replication & operating models: from pilots to roll-out toolboxes and governance
- Procurement-ready outputs: specifications, templates, contracting pathways

- Translate biomass flow intelligence into actionable, investment-ready circular value chains (regional to EU scale).
- Combine material-flow accounting with geospatial monitoring, techno-economic assessment and lifecycle impacts to compare pathways and constraints.
- Turn secondary biomass (bio-waste and residues) into reliable feedstocks via standardisation, traceability and platform-enabled matching of supply and demand.
- Extend circular design into end-use sectors (e.g., construction) through ecodesign, quality assurance and scalable markets for reused/recycled biobased materials.



## CIRCBIO-05 (2026): Understanding biomass flows in Europe

### Goal

**A harmonised, administration-light monitoring and modelling layer that quantifies biomass supply–demand, sustainability constraints and value-adding opportunities.**

### Core R&D

- Novel hybrid methods: MFA + remote sensing + statistical/AI models for consistent, uncertainty-aware estimates.
  - Scenarios to 2050: quality-aware biomass categories, competing uses, and non-satisfied demand under sustainability limits.
  - Regional roadmaps: decision support for where valorisation yields highest environmental and socio-economic returns.
- Updated EU & national biomass supply/demand accounts with explicit sustainability implications.
  - Open, interoperable digital tools for stakeholders (business and administrations) to explore pathways and trade-offs.
  - Feasibility demonstration of biomass reporting across test regions in  $\geq 10$  countries (diverse biomass potentials).
  - Interfaces for downstream calls: platform design inputs (CIRCBIO-07) and sectoral circularity cases (e.g., construction).

## CIRCBIO-07 (2027): Improving biomass flows for a sustainable and circular bioeconomy

- Create and scale biomass platforms that aggregate, pre-treat and standardise under-utilised biomass (bio-waste, food losses/waste, industrial residues).
- Design bankable business models with municipalities and aggregators: transparent pricing, quality specs, end-of-waste pathways, and risk sharing.
- Deploy digital traceability and logistics optimisation (collection → pre-treatment → users) to reduce costs, emissions and contamination risks.
- Establish or strengthen  $\geq 5$  regional platforms (urban + rural), with replication playbooks for Central & Eastern Europe, Ukraine and EU candidate countries.
- Demonstrate conversion of standardised feedstocks into added-value products through targeted technological innovations at TRL 6–8.



## CIRCBIO-02 (2027) + Cities/NEB: Circular construction products and city-scale reuse markets

- Develop and demonstrate circular ecodesign of construction products (durability, separability, reusability, reparability, recyclability; higher recycled/secondary biobased content).
- Lifecycle validation using Product Environmental Footprint (where applicable) and robust contaminant/quality control for reuse and recycling.
- Mechanisms & incentives: extended guarantees, VAT or procurement levers; solutions to trade-offs (cost, performance, safety, compliance).
- City-scale deployment: tools for urban mining, inventories of reclaimed products, and marketplaces/material banks.
- Diagnosis & performance characterisation of used products and demolition waste to enable safe reuse across borders.
- Whole life-cycle GHG inventories of buildings to support decisions aligned with EPBD recast.
- Demonstration in  $\geq 3$  cities (different MS/AC), integrating value chains, SMEs, owners, authorities and civil society.

## Consortium roles for BIOFLOW EUROPE / BIOPLATFORMS+ / CIRC-BIOBUILD

- **Research:** material-flow accounting, demand modelling, uncertainty quantification, remote sensing (Copernicus/Galileo), TEA/LCA/PEF.
  - **Digital:** interoperable data spaces, AI/analytics, traceability, marketplace architecture, cybersecurity & governance.
  - **Standardization & policy:** end-of-waste criteria, construction product compliance, procurement incentives, SSH for adoption.
- **Public sector:** cities/regions and waste management authorities ready for reporting pilots and platform deployment (incl. CEE/Ukraine where relevant).
  - **Industry:** biomass aggregators, pre-treatment/standardisation tech providers, biorefineries/biomanufacturers, construction product manufacturers.
  - **Market enablers:** investors/finance, insurers, certification bodies, and platforms that can scale beyond pilots.