VANGUARD INITIATIVE
New growth through smart specialisation

Pilot Mid-Term Review Pitch 2026

Bioeconomy Pilot
Interregional cooperation on
innovative use of non-food biomass

September 25, 2026

Pilot Approach

1. Societal & Industrial Challenge(s) To Be Addressed

- **Reduce dependence on fossil-based raw materials** through **renewable** and **circular alternatives**.
- **Accelerate the industrial uptake of bio-based technologies** and bridge the gap between R&I and market deployment.
- **Support decarbonisation** in transport, chemicals, construction and other hard-to-abate sectors.
- **Valorise biomass**, **bio-based residues and side-streams** through circular and **zero-waste value chains**.
- **Strengthen interregional cooperation** between feedstock suppliers, technology providers, industry, research and end users.
- **Improve SME scale-up**, **market readiness**, and **access to finance**.

2. Pilot Objectives in 2026

1. **Strengthen interregional cooperation and value chains,** connecting **regions**, **companies**, **research organisations**, **SMEs** and end users.
2. **Accelerate industrial scale-up and market uptake,** moving **Demo Cases** to validation, replication and commercial deployment.
3. **Mobilise projects, investment and funding,** supporting **SMEs** and leveraging **VInnovate**, **I3**, **Horizon Europe** and **CBE JU.**

3. Pilot Governance

- **Co-leading region**: **Lombardy**.
- **Pilot coordination**: regular exchanges with participating regions and Demo Case actors.
- **Regional representatives**: bilateral coordination to strengthen ownership and **strategic participation**.
- **Demo Case coordination**: **thematic leadership** and dedicated contact persons for each value chain.
- **Project consortia**: cooperation around specific funding, demonstration and investment opportunities.
- **EU strategic interface**: **cooperation with CBE JU**, EFI Bioregions, ERRIN and ERIAFF.

Pilot Activities

1. Mapping of Activities within Pilot Methodology:

Connect & Learn

- **Strengthened interregional cooperation**, linking **Demo Cases**, market needs and funding opportunities.
- **Reinforced SME capacity building** through **mentoring, hackathons and roadshows**, supporting market and investment readiness.
- **Results: 12 teams supported**, with up to 240 mentoring hours, developing a methodology for **Vanguard-wide replication**.
- **EU alliance: MoU signed with CBE JU** and European networks.

Demonstrate & Commercialise

- **Advanced four Demo Cases:** bio-aromatics, biobased construction, biopolymers and Bio-LNG, toward **industrial validation and market deployment**.
- **Results: LignoValue**: 72-hour campaign at 40 kg/h; **CIRCUROAD**: 11-section road programme; **biopolymers**: toward TRL 8–9; **Bio-LNG**: zero-waste biomethane value chains.

2. Highlights of 2026

- **LignoValue:** 72-hour **lignin depolymerisation campaign at 40 kg/h**, supporting industrial **bio-aromatics**.
- **CIRCUROAD: TRL 6 to real-road validation**, with an **11-section programme** and new biobased asphalt trials on the A20.
- **Biopolymers:** focus on **AI-assisted formulation**, industrial validation and interregional scale-up.
- **Bio-LNG:** broader zero-waste biomethane value chain linking mobility, decarbonisation and resource recovery.
- **Project generation: 3 European proposals submitted** and a **new I3 proposal underway**.
- **Events: 2 conferences** organised in May 2026, with **64 and 102 participants**.

Assessment of Pilot Progress

1. Pilot Engagement

- **Involvement of VI Regions:** **bilateral meetings** strengthen regional ownership and explore **new co-leadership roles**.
- **Connections between clusters, SMEs & TIs:** Demo Cases and **matchmaking** connect SMEs, clusters, technology providers and research organisations.
- **Learnings:** **DRIVE methodology** links technical scale-up with business modelling, market and investment readiness.
- **Demo Cases:** **four areas** – Bio-aromatics, Biobased B&C, Biopolymers and Bio-LNG – focused on industrial validation, replication and market deployment.
- **Projects:** **3 European proposals submitted**, a **new I3 underway**, plus a **growing portfolio** including **SAUNA, BIO-CAPPP, CIRCULAR-C, HIBISCUS and SYMBIO**.

2. Key Advances

- **New Biobased Building & Construction activity**, led by **South Netherlands**, focused on **natural fibres, renewable materials, green procurement** and market-oriented use cases.
- **CIRCUROAD** progressed from TRL 6 towards an 11-section **real-road demonstration program**.
- **Biopolymers** advanced towards **integrating AI-supported formulation** and circularity.

3. Key Challenges

- **Increase regional ownership and participation**, engaging **additional regions and industrial actors** in Demo Cases and project generation.
- **Mobilise the right value-chain actors**, especially industrial end users, technology providers, and SMEs needed for demonstration and scale-up.
- **Bridge demonstration and market deployment**, converting **mature technologies** into investable, replicable industrial value chains.
- **Build credible investment cases and consortia** able to access **I3, VInnovate, Horizon Europe and CBE JU funding**.

Elements to use for VI Communication

1. Link to Policy level

- **EU Bioeconomy Strategy 2025:** dialogue with **DG RTD – Bioeconomy and Food Systems** to connect **EU priorities with regional deployment** and Demo Cases.
- **VI–CBE JU–EFI Bioregions–ERRIN–ERIAFF MoU: 2026–2027 Action Plan** linking regional ecosystems with EU policy, funding and investment mechanisms.
- **STEP Seal & public procurement:** support for **high-quality industrial projects**, funding synergies and green procurement as drivers for bioeconomy deployment.

2. Link with Industrial Strategy

- **Industrial scale-up**: Demo Cases connect regional capabilities, pilot infrastructures and industrial partners to accelerate market deployment.
- **Strategic value chains**: focus on **bio-aromatics, biobased construction, biopolymers and Bio-LNG**, supporting circularity and industrial decarbonisation.
- **Interregional investment**: **I3, VInnovate, Horizon Europe and CBE JU** are used to turn mature value chains into industrial projects and investments.

3. Link with Innovation Implementation

- **CIRCUROAD**: strong case study for moving from TRL 6 to real-road demonstration, with an 11-section validation programme and increasing involvement of public procurers.
- **I3 pipeline**: three European proposals submitted in 2026, including one I3 Strand 2b proposal, with an additional I3 proposal under preparation.
- **Replicable innovation cases**: **SAUNA**, **BIO-CAPPP**, **CIRCULAR-C**, **HIBISCUS** and **SYMBIO** demonstrate **TRL progression**, industrial applications and opportunities for **cross-regional replication**.

Your Observations & Elements to Share

Pilot Perspectives

Strengthen the collective EU positioning of the Vanguard Pilot network through **strategic and integrated communication**, presenting Pilots as a **coordinated platform** for **industrial innovation, demonstration and market deployment**.

Pilot Needs

- **Strengthen direct dialogue with EU institutions**, for example through **dedicated meetings with relevant European Commission DGs**, where several Pilots jointly present results, Demo Cases and emerging industrial needs.
- **Coordinate Pilot participation in key EU events and policy discussions**, ensuring consistent Vanguard messages and greater visibility.

Pilot Opportunities

- Develop a joint **"Vanguard Success Stories" portfolio**, showcasing measurable results such as **TRL progress, investments, industrial participation and interregional replication**.
- Organise **cross-Pilot thematic meetings** around **strategic EU priorities**—for example **Clean Industrial Deal, circularity, advanced materials, digitalisation and bioeconomy**—bringing together regions, companies and EU representatives.

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