

VANGUARD INITIATIVE

New growth through smart specialisation

Bioeconomy Pilot

Interregional cooperation on innovative use of non-food Biomass

Partnership with Vanguard initiative regions

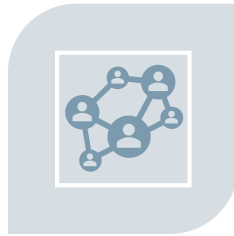
Ilaria Re, Consorzio Italbiotec | Lombardy Green Chemistry Association

East and North Finland regions WebMeeting
Milan, 18 February 2020

New growth through the Smart Specialization

The Vanguard Initiative mission and benefits for EU regions

www.s3vanguardinitiative.eu



SUPPORTING THE SETTING UP OF
INTERREGIONAL NETWORKS



FACILITATING ACCESS TO
COMBINED FUNDING FOR CO-
INVESTMENT PROJECTS



EXPLORING SOLUTIONS TO
LEVERAGE PUBLIC-PRIVATE
INVESTMENTS FOR
DEMONSTRATION AND PILOTING
NEW VALUE CHAINS



IMPLEMENTATION OF SMART
SPECIALIZATION STRATEGIES TO
FOSTER BETTER ALIGNMENT
BETWEEN THE REGIONS

Bioeconomy

Efficient and Sustainable
Manufacturing (ESM)

High Performance Production
through 3D-Printing

Advanced Manufacturing for
Energy Related Applications in
Harsh Environments (ADMA
Energy)

New Nano-Enabled Products Pilot

The Bioeconomy Pilot

Trans-regional value chains in innovative use of renewable resources



SUPPORT THE CREATION OF NEW INTEGRAL BIO-BASED VALUE CHAINS



Mapping the most promising technologies and trends in the bio-based sector



PROMOTE NEW BUSINESS OPPORTUNITIES



Supporting the creation of interregional partnerships



ENCOURAGE PROJECT AT THE DEMONSTRATION STAGE TOWARDS THEIR UPGRADING



Support business plans implementation



PROMOTE INVESTMENT PIPELINES BASED ON INDUSTRY -DRIVEN BUSINESS CASES



Enhance bioeconomy in Smart specialisation Strategy at regional level

Leading regions: Lombardy (IT), Randstad (NL)

Regions involved and expressed their commitment

Basque Country	Małopolska	Randstad/Zuid Holland	Värmland
Emilia-Romagna	Navarra	Scotland	Wales
Flanders	North Netherlands	Slovenia	Wallonia
Lombardy	North Rhein-Westphalia	South Netherlands	
Lower Austria	Piedmont	Upper Austria	

The Bioeconomy Pilot demo-cases

New bio-based chemicals and biofuels pilot plants

Bioaromatics demo-case

Creating interregional value chains to produce lignin-based aromatic molecules and innovative sustainable materials.

Use-cases:

1. **Sugar to bio-aromatics.** Sugar-line based on furan and Diels-Alder chemistry: leading to functionalized furans and aromatics
2. **Lignin to bio-aromatics (lignoValue plant).** Lignin line based on depolymerisation, fractionation, conversion: leading to innovative functionalized molecules
3. **Thermochemical conversion of biomass to bio-aromatics:** leading mostly to bio-based BTX molecules

Lignocellulosic biorefinery demo-case

Set-up of European value chains from lignocellulose biomass to intermediate and end-products of bulk and fine chemicals.

Use-cases:

1. **Large-scale biorefinery, the "Redefinery project"** focused on the production of sugar from cellulose and hemicellulose plus sustainable bio-asphalt from lignin (stemming from hardwood chip/pellets as feedstock).
2. **Softwood-based biorefinery** focused on the production of mixed sugars and panel form lignin (softwood as feedstock)
3. **Local4Local biorefinery**, based on small-medium biorefinery of wood, with cellulose to fiber and syngas production from the hemicellulose/lignin fraction.

Liquified Bio-methane demo-case

Enhance wide diffusion of bio liquified natural gas for sustainable transport across Europe, by advancing the state of the art of biogas upgrading.

Use-cases:

1. **Liquified Bio-methane - LNG Blue Corridor** focused on enhancing a wide diffusion bio-LNG for public transport mobility
2. **SMBio-LNG Shaping the future of Sustainable Mobility** aiming at deploying a sustainable supply chain of liquefied biomethane for heavy vehicles mobility

Interregional cooperation for sustainable growth

2019 impact and results of the Bioeconomy Pilot



VALIDATE A SUSTAINABLE AND PORTABLE ROUTE FOR BIOAROMATICS MOLECULES PRODUCTION

The LignoValue Pilot plant will cost € 4.3 mln and should be operational in 2021.

- **1 BUSINESS PLAN SUBMITTED TO THE DG REGIO – THEMATIC SMART SPECIALIZATION PLATFORM**



ENCOURAGE THE INDUSTRY OPERATING IN VANGUARD REGIONS ON TESTING BIOAROMATICS

Selection of promising applications for these novel renewable aromatics are in adhesives, polymers, coatings and lubricants.



FACILITATING ACCESS TO COMBINED FUNDING FOR CO-INVESTMENT PROJECTS

Supporting the creation of interregional partnerships

- **1 NEW PARTNERSHIP ON BIOPOLYMERS PRODUCTION UNDERCONSTRUCTION**
- **50+ INDUSTRIES INVOLVED IN DEMO-CASES**
- **BIOECONOMY PLATFORM OF REGIONS (joint initiative with BIC)**



SUPPORT AN AGROCHEMICAL COALITION CREATION

Design new sustainable value chains based on the connection between the agricultural and chemical industry.

- **2 NEW USE-CASES**
- **2 NEW BUSINESS PLANS**
- **1 TAF – Technical Assistance Facility of DG Regio**



PROMOTE A BIOECONOMY ALLIANCE AMONG OTHER EUROPEAN INITIATIVES

Connecting programmes and regional strategies, clusters and public& private actors

- **10+ REGIONS INVOLVED IN MATCHMAKING EVENTS**
- **7 COLLABORATIVE ALLIANCES ON BIO-BASED SECTOR**

VANGUARD INITIATIVE

Stimulating bio-based investments in EU regions

Future cooperation scenarios

- Encourage the creation of new biobased value chains corresponding to the region's bio-based investment priorities
- Involve industry actors in the Bioeconomy Pilot demo-cases and build new partnerships
- Promote investment pipelines based on industry-driven business cases
- Support a better alignment of funding opportunities for bio-based investment & associated financial incentives at the transregional level
- Access alternative sources of finance for excellent, but unsuccessful BBI JU or other EU funding proposals, with special attention to high TRL projects
- Support regions on defining Key performance indicators and local funding measures for bioeconomy growth by the selection of the most promising use-cases and business models

A person wearing a white lab coat is using a pipette to transfer liquid into a multi-well plate. The background is a dark blue gradient.

Many thanks for your attention!

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