The Vanguard Initiative leading by example in the Green Transition (WS)
The Vanguard Initiative leading by example in the Green Transition (WS)

Session moderator:
Farha Brahmi,
Network Manager, Vanguard Initiative

Speakers:

- Victor Vaugoin, Director of the Lower Austria Liaison Office
- Felix Mittermayer, Administrator in the European Parliament, Committee on Agriculture and Rural Development (AGRI), Member of the Inter-Parliamentary Working Group on the Green Deal
- Gian Luca Gurrieri, Head of the Unit Air Quality and Landscape of the Lombardy Region
- Tiziana Apollonia De Nittis, General Directorate for the Knowledge Economy, Labour and Enterprise Research, Innovation, Energy and Sustainable Economy Service of the Emilia Romagna Region
- Indalecio González, Asturian Energy Foundation (FAEN), coordinator of Asturias Hydrogen Strategy, Principality of Asturias
- Eva Pando, General Director of the Economic Development Agency of the Principality of Asturias (IDEPA)
- Hubert Schrenk, Project Manager, e-mobility initiative of Lower Austria, ecoplus Lower Austria Business Agency
- Harma Albering, Director for Circular Economy, Limburg Province
- Katrien Bernaerts, Associate Professor, Faculty of Science and Engineering of Aachen-Maastricht Institute for Biobased Materials (NL)
The European Green Deal

New Challenges for Europe’s Cohesion
Green Deal Communication: Adopted by the Commission on 11.12.2019

The European Green Deal is about improving the well-being of people. Making Europe climate-neutral and protecting our natural habitat will be good for people, planet and economy. No one will be left behind.

The EU will:

- Become climate-neutral by 2050
- Protect human life, animals and plants, by cutting pollution
- Help companies become world leaders in clean products and technologies
- Help ensure a just and inclusive transition
Transforming the EU’s economy for a sustainable future

The European Green Deal

And leave No one behind

Increasing the EU’s Climate ambition for 2030 and 2050

Mobilising industry for a clean and circular economy

Supplying clean, affordable and secure energy

Building and renovating in an energy and resource efficient way

A zero pollution ambition for a toxic-free environment

Preserving and restoring ecosystems and biodiversity

From ‘Farm to Fork’: a fair, healthy and environmentally friendly food system

Accelerating the shift to sustainable and smart mobility

Financing the transition

Leave no one behind (Just Transition)

The EU as a global leader

A European Climate Pact
Isn’t it all too costly?

Without action on climate change, the EU will see, in the lifetime of our children:

**Heat and drought**
- 90,000 annual deaths as a result of heatwaves

**Water and flooding**
- 40% less available water in southern regions of the European Union
- 2.2 million people exposed to coastal inundation each year
- Half a million people exposed to river flooding each year

**Additional facts**
- 660,000 additional asylum applications per year in the EU at 5°C temperature increase
- 16% of species at risk of extinction at 4.3°C temperature increase

**Pollution**
- 400,000 premature deaths per year today due to air pollution. This figure is expected to soar

**Economics**
- €190 billion annual losses projected for a 3°C increase in global average temperature
  - Source: Oscuri et al., 2014. Climate impacts in Europe, the European Commission’s Joint Research Centre PESETA II project
- Climate change could lead to a 20% food price rise in 2050
- Globally, the number of people at risk of being forced from their homes by river flooding could increase to 50 million a year
  - Source: Internal Displacement Monitoring Centre, Assessing the impacts of climate change on flood displacement risk, 2019
- Economic costs of heat-related mortality could amount to more than €40 billion per year
Felix MITTERMAYER
European Parliament
Directorate-General for Internal Policies of the Union
Directorate for Structural and Cohesion Policies
Secretariat of the Committee on Agriculture and Rural Development
BRU - SQM 07Y055 - Tel. +32 228 31525
felix.mittermayer@ep.europa.eu
www.europarl.europa.eu
The Emilia- Romagna Region: a frame for a Sustainable Future & Economy

A. Tiziana De Nittis

Emilia - Romagna Region
Directorate General - Knowledge, Research, Labour, Enterprises
Sustainable innovation, Enterprises, Industrial chains
Energy and Green Economy area
Regional Energy Plan

- The new RP ERDF 21-27
- The 3-Year implementation Plan
- The new S3

And much more.....

- The Regional ecosystem: a land of innovation
- Policy instruments: the new RP ERDF, S3, the Regional Energy Plan....
- International cooperation & Agreements....
The Regional ECOSYSTEM

- 7 National and International Research Centres
- 7 Universities with 166K students + Bologna Business School
- 91 Research Laboratories + 10 Technopoles
- 65 IR ESFRI
- 2 European Agencies (ECMWF, EFSA)
- 34 Incubators and accelerators
- 9 Regional Clust-ER (s)
- 1 Regional Agency – ART-ER Joint Stock Consortium fostering region’s sustainable growth, innovation, knowledge, attractiveness & internationalisation

1st Region in ITALY «Regional Innovation Scoreboard 2021» by EU commission «Strong Region»
1° Region in export and in patent per capita
1° Region for foreign university students
1° Region in access to broadband
# The S3 of Emilia – Romagna Region

<table>
<thead>
<tr>
<th>A smarter Europe</th>
<th>A greener Europe</th>
<th>A more connected Europe</th>
<th>A more social and inclusive Europe</th>
<th>A Europe closer to citizens</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industrial Specialization systems</strong></td>
<td><strong>1.</strong> Clean, affordable and secure energy</td>
<td><strong>2.</strong> Circular economy</td>
<td><strong>3.</strong> Climate and natural resources (air, water and land)</td>
<td><strong>4.</strong> Blue growth</td>
</tr>
<tr>
<td></td>
<td><strong>5.</strong> Innovation in materials</td>
<td><strong>6.</strong> Digitalisation, Artificial Intelligence, Big Data (firms and PA)</td>
<td><strong>7.</strong> Manufacturing 4.0 and future evolutions</td>
<td><strong>8.</strong> Connectivity of ground and space systems</td>
</tr>
<tr>
<td></td>
<td><strong>9.</strong> Sustainable and innovative mobility and motor industry</td>
<td><strong>10.</strong> Cities and communities of the future</td>
<td></td>
<td><strong>11.</strong> Heritage and identity of the region: cultural assets and contents, creative activities, tourism and Made in E-R products</td>
</tr>
<tr>
<td></td>
<td><strong>12.</strong> Wellbeing, nutrition e lifestyle</td>
<td></td>
<td></td>
<td><strong>13.</strong> Health</td>
</tr>
<tr>
<td></td>
<td><strong>14.</strong> Social innovation and social participation</td>
<td></td>
<td></td>
<td><strong>15.</strong> Inclusion and social cohesion, education, jobs, territories</td>
</tr>
</tbody>
</table>

From **cross-cutting topic (S3) Blue Growth** in EU programming period 2014-2020

To **Theme priority area in the new S3 EU programming period 2021-2027**
International cooperation & Agreements....

**Vanguard Initiative**

ERR **leading** the Pilots:

- **Artificial intelligence & Human-Machine Interface** (AI&HMI)
- **New Nano-enabled Products** (NANO since 2018)
- **Advanced Manufacturing for Energy Related Application in Harsh Environments** (ADMA since 2022)

and participating to:

- **Pilot 3D-PRINTING**
- **Smart Health** (as partner)
- **ESM Efficient And Sustainable Manufacturing**
- **Bioeconomy**
- **Hydrogen**

---

**S3 Hydrogen Valleys partnership**

Since 2019 ERR part of it, involving more than **40 European Regions from 13 Countries** to support the production of clean Hydrogen via renewable energy sources; energy transport and industry....

Undersigning the **Under2MOU coalition**, led by the **Governor of California**
- more than **260 Governments globally**
- representing **1.75 billion people** and **50% of the global economy**

---

**FCH JU FUEL CELL AND HYDROGEN JOINT UNDERTAKING** Emilia-Romagna signed in **2018 a MoU**

to promote the introduction of fuel cells and hydrogen technologies on the market
Green Transition in Asturias

New Challenges for Europe’s Cohesion
MARINE RENEWABLE ENERGIES IN ASTURIAS

• Last decade: Industrial supply chain well developed
• New decade: Great Targets in the Regional Energy Transition Strategy
• Need of collaboration. Partner of ADMA Energy pilot and other initiatives
HYDROGEN IN ASTURIAS

- Great targets due to the decarbonisation of regional industry sector
- Asturias H2 Valley
- Need of collaboration. Partner of H2 pilot and other initiatives
Hy2Lower Austria
Action plan to green Hydrogen
Movement and progress with hydrogen for and from Lower Austria

Opportunities and potentials for business and research in Lower Austria in economic and sustainable production, transport and use of green hydrogen!
Survey of the potentials and needs for green hydrogen in Lower Austria

- production
- storage
- transport
- application
- consumption,

including the technology required and available for this in Lower Austria.
Options for action to Lower Austria

• Identify focal points with high leverage
• Implementation of pilot projects in promising fields with high potential for value creation
Clusters in Lower Austria

ecloplus. The Business Agency of Lower Austria
E-mobility in Lower Austria

Niederösterreich-Ring 2, Haus A
3100 St. Pölten
Tel: +43 2742 9000-19650

e-mobil-noe@ecoplus.at
www.e-mobil-noe.at
www.facebook.com/ecoplus.noe
www.instagram.com/ecoplus.noe
www.linkedin.com/company/ecoplus-noe

DI (FH) Hubert Schrenk
Project Manager Mechatronics-Cluster
Contact "e-mobility initiative of Lower Austria”
h.schrenk@ecoplus.at
Sustainability initiatives at UM in Limburg, the Netherlands

Katrien Bernaerts
Maastricht University
katrien.Bernaerts@maastrichtuniversity.nl
In the south of the Netherlands, at the heart of Europe
We are the European university of the Netherlands.

Aachen Maastricht Institute for Biobased Materials

Mission & Identity

“Ground-breaking conversion of biomass to biobased materials and into product applications”

We create added value at any step in the value chain from biomass to application
  - by creating outstanding crossborder teams
  - with synergistic core competences and infrastructure

#EURegionsWeek

provincie limburg

New Challenges for Europe’s Cohesion
AMIBM value chain in 7 expertise groups

- Molecular and applied biotechnology
- Organic chemistry of biobased building blocks
- Biobased polymers
- Polymer physics and technology
- Polymer engineering
- Biobased materials for medicine
- Sustainability of materials

New Challenges for Europe’s Cohesion

Sustainable polymer synthesis group
- Biomass as raw materials instead of fossil based
- Green conversion of raw materials to polymers
- End of life of polymers: biodegradability / recycling

#EURegionsWeek
Participation in Interregional Innovation Investment (I3) project via Vanguard initiative

- The project aims to implement an integrated value chain, from the production of materials from agro-waste biomass to its distribution and use in several sectors.

**WP1. Project management**

**IMPLEMENTING 3 BIO-BASED VALUE CHAINS**

- WP2. Preliminary characterization of waste oils and analysis of technologies
- WP3. Implementation of bio-based polyurethanes from grapeseed oil
- WP4. Implementation of a bio-based cosmetic ingredient from olive pomace oil
- WP5. Market uptake
- WP6. Sustainability and techno-economic feasibility assessment

**WP7. Communication, dissemination and exploitation of project results**