



EUROPEAN WEEK OF
REGIONS & CITIES

2003 - 2022

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New Challenges for
Europe's Cohesion

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



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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)

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New Challenges for Europe's Cohesion

The European Green Deal



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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.

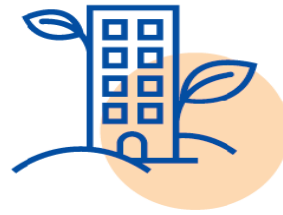
The EU will:



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

Mobilising research and fostering innovation

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

Leave no one behind (Just Transition)

And leave No one behind

Financing the transition

The EU as a global leader

A European Climate Pact



Increasing the EU's Climate ambition for 2030 and 2050

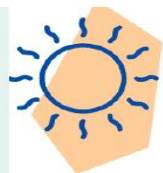
Supplying clean, affordable and secure energy

Mobilising industry for a clean and circular economy

Building and renovating in an energy and resource efficient way

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 heatwaves¹

⚠️ **660,000** additional asylum applications per year in the EU at 5°C temperature increase²

⚠️ **16%** of species at risk of extinction at 4.3°C temperature increase³



Economics

⚠️ **€190 billion** annual losses projected for a 3°C increase in global average temperature

Source: Ciscar 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



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



Pollution

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



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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

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**New Challenges for
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New Challenges for
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The Emilia- Romagna Region: a frame for a Sustainable Future & Economy



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A.Tiziana De Nittis

Emilia - Romagna Region

Directorate General - Knowledge, Research, Labour, Enterprises
Sustainable innovation, Enterprises, Industrial chains
Energy and Green Economy area





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**Ecological
Transition**

Regional Energy Plan

**The new RP ERDF
21-27**

**The 3-Year
implementation Plan**

The new S3

And much more.....

**New Challenges for
Europe's Cohesion**

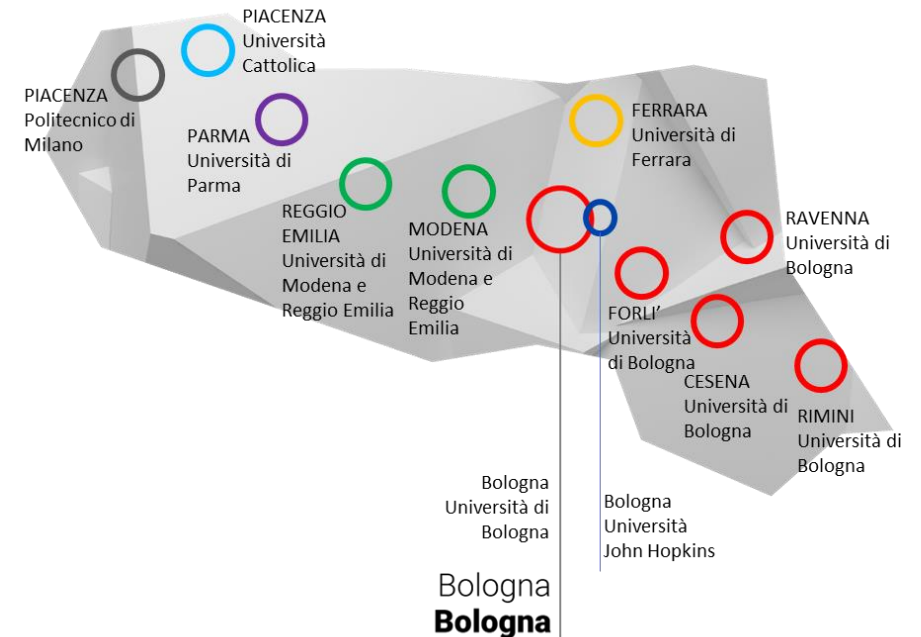
- **The Regional ecosystem: a land of innovation**
- **Policy instruments: the new RP ERDF, S3, the Regional Energy Plan....**
- **International cooperation & Agreements....**

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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

		A smarter Europe	A greener Europe	A more connected Europe	A more social and inclusive Europe	A Europe closer to citizens
Industrial Specialization systems	Agri-food	<ol style="list-style-type: none"> 1. Clean, affordable and secure energy 2. Circular economy 3. Climate and natural resources (air, water and land) 4. Blue growth 5. Innovation in materials 6. Digitalisation, Artificial Intelligence, Big Data (firms and PA) 7. Manufacturing 4.0 and future evolutions 8. Connectivity of ground and space systems 9. Sustainable and innovative mobility and motor industry 10. Cities and communities of the future 11. Heritage and identity of the region: cultural assets and contents, creative activities, tourism and Made in E-R products 12. Wellbeing, nutrition e lifestyle 13. Health 14. Social innovation and social participation 15. Inclusion and social cohesion, education, jobs, territories 				
	Building and Construction					
	Mechatronics and Motor Engineering					
	Health and Wellness Industries					
	Cultural and Creative Industries					
	Tourism Industry					
	Energy and Sustainable Development					
	Innovation in Services					

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



Thematic 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

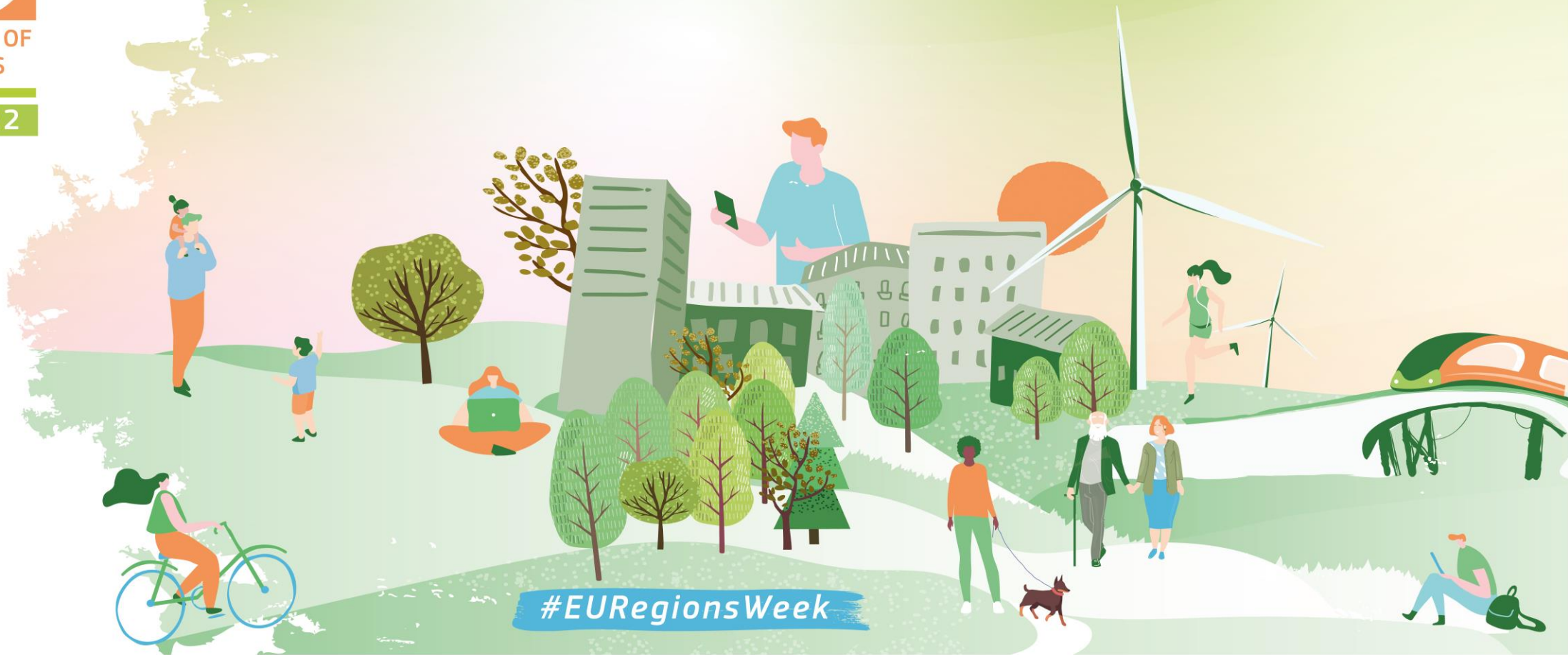


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Green Transition in Asturias

New Challenges for
Europe's Cohesion





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MARINE RENEWABLE ENERGIES IN ASTURIAS

New Challenges for
Europe's Cohesion

- 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



VANGUARD INITIATIVE



Regione Emilia-Romagna

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SUPERCLUSTER
ATLANTIC WIND



CPMR ATLANTIC ARC
COMMISSION





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HYDROGEN IN ASTURIAS

New Challenges for
Europe's Cohesion

- Great targets due to the decarbonisation of regional industry sector
- Asturias H2 Valley
- Need of collaboration. Partner of H2 pilot and other initiatives



VANGUARD INITIATIVE



Regione Lombardia

MAŁOPOLSKA



XUNTA DE GALICIA

Region Gävleborg

STAATSBÜRO FÜR WIRTSCHAFT ARBEIT UND VERKEHR



SACHSEN



Lower Saxony



Llywodraeth Cymru
Welsh Government



GOBIERNO DEL PRINCIPADO DE ASTURIAS

CCDRn



Comissió de Coordinació i Desenvolupament Regional del Nord

SCOTLAND EUROPA

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Hydrogen Europe



EUROPEAN HYDROGEN VALLEYS PARTNERSHIP



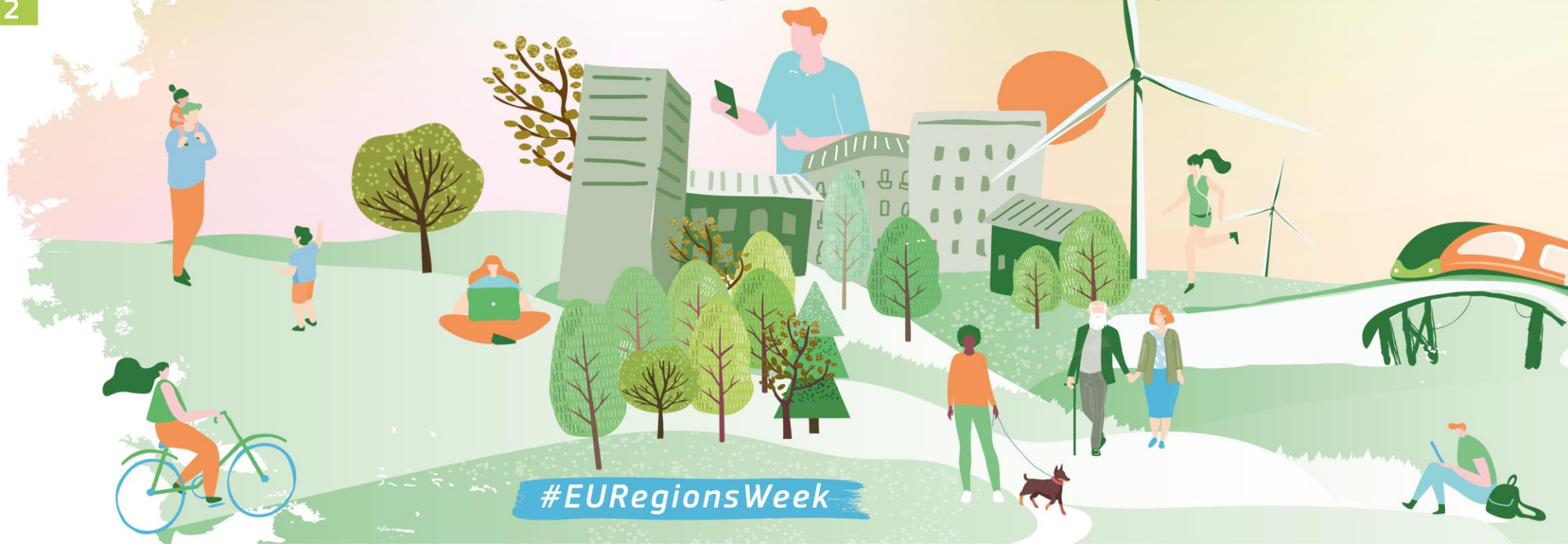


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New Challenges for
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Hy2Lower Austria Action plan to green Hydrogen



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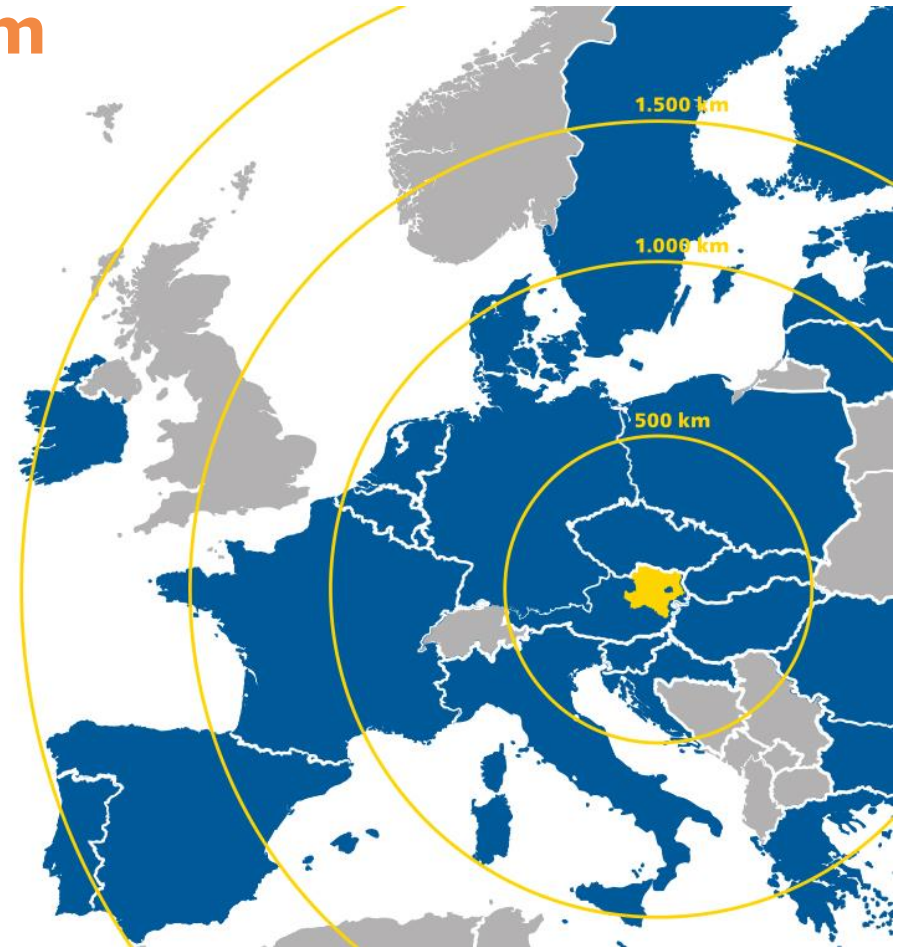
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Movement and progress with hydrogen for and from Lower Austria

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

**New Challenges for
Europe's Cohesion**



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Survey of the potentials and needs for green hydrogen in Lower Austria

New Challenges for Europe's Cohesion

- production
- storage
- transport
- application
- consumption,



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





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Options for action to Lower Austria

New Challenges for
Europe's Cohesion

- Identify focal points with high leverage
- Implementation of pilot projects in promising fields with high potential for value creation



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DI (FH) Hubert Schrenk

Project Manager Mechatronics-Cluster

Contact "e-mobility initiative of Lower Austria"

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Clusters in Lower Austria

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

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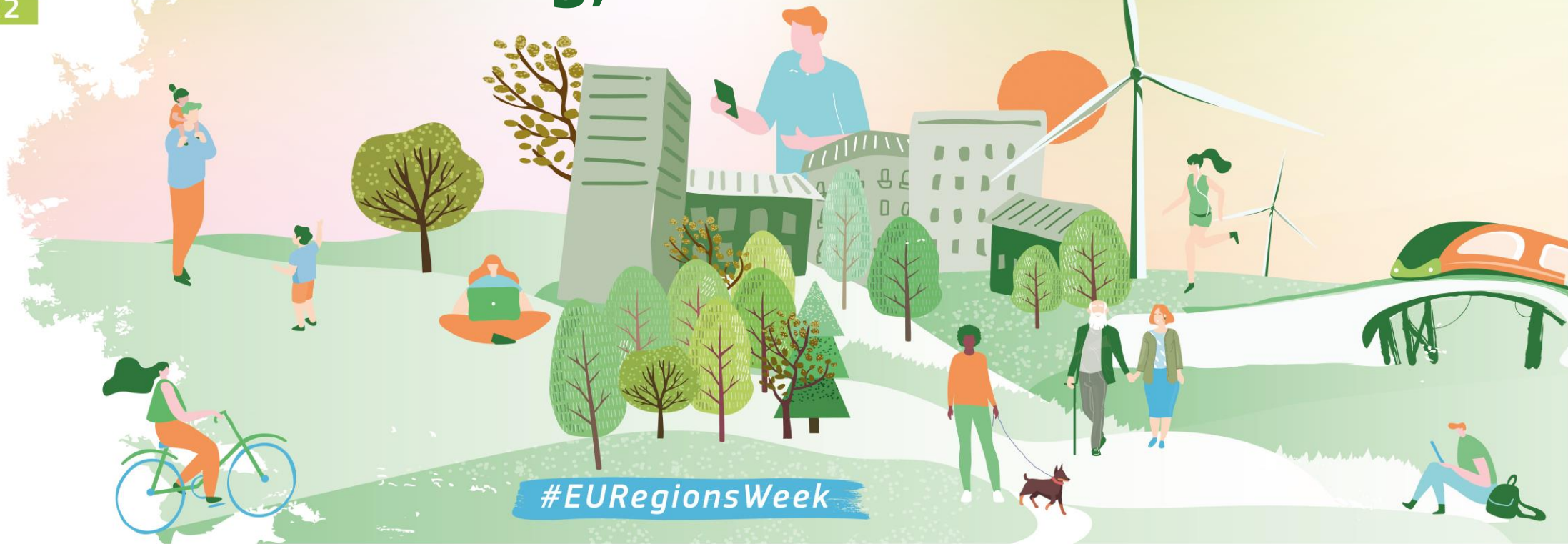


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Sustainability initiatives at UM in Limburg, the Netherlands



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Katrien Bernaerts

Maastricht University

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In the south of the Netherlands, at the heart of Europe

We are the European university of the Netherlands.



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Aachen Maastricht Institute for Biobased Materials

 Maastricht University



provincie limburg



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Mission & Identity

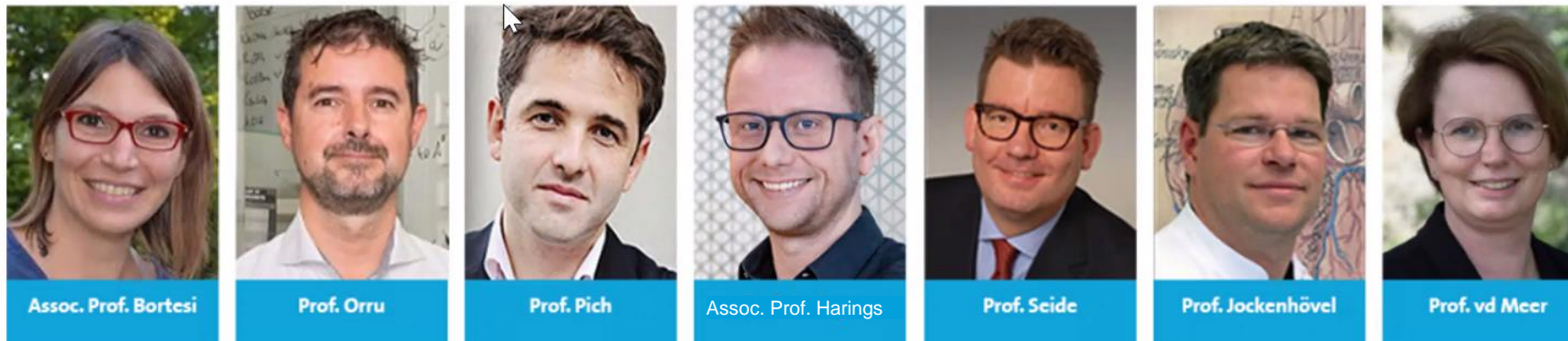
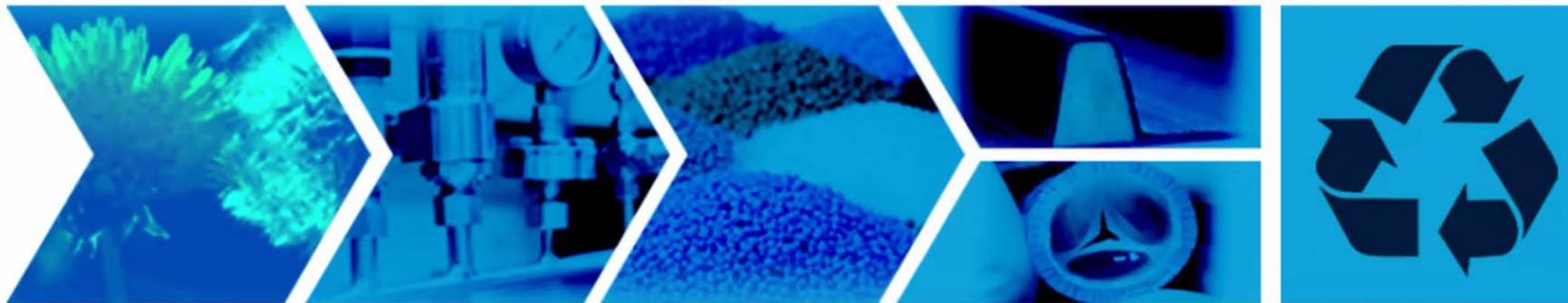
*"Ground-breaking conversion of biomass
to biobased materials and into product applications"*

We create added value at **any step in the value chain** from biomass to application

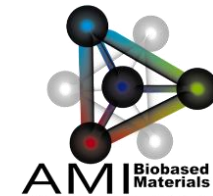
- by creating outstanding **crossborder** teams
- with **synergistic** core competences and infrastructure


AMIBM value chain in 7 expertise groups

New Challenges for Europe's Cohesion



 Maastricht University



provincie limburg 



Assoc. Prof. Bernaerts

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

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VEGEA



ROELMI·HPC
Health & Personal Care



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

New Challenges for
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- 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.

