

INTERREG EUROPE CEI BOOST

Empowering innovation for sustainable future

**Interreg
Europe**



Co-funded by
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CEI BOOST

HIGHLIGHTS FROM SEMESTER 1

In our ongoing mission to enhance regional knowledge capital and promote sustainable growth, we're thrilled to share the latest updates from our project activities.

DIGITAL INNOVATION AND CIRCULAR ECONOMY ECOSYSTEMS ANALYSIS FROM ALL PARTNER'S REGIONS

Project partners developed an analysis of the circular economy, digital innovations and digitalisation status in each region.

1ST TRANSNATIONAL MEETING IN VILNIUS

Here are some insights from our 1st Transnational meeting in Vilnius, Lithuania 29-30 August 2023.



- 1 1st Transnational partners meeting| Vilnius,Lithuania
- 2 DIGITAL INNOVATION AND CIRCULAR ECONOMY ECOSYSTEMS ANALYSIS from all partner's regions
- 2 Sweden, Partner: Region Västerbotten
- 3 Lithuania, Partners: Lithuanian Innovation Centre, Innovation Agency Lithuania
- 4 Finland, Partners: LAB University of Applied Science, Regional Council of Päijät-Häme
- 5 Bulgaria, Partner: Business Agency Association
- 6 Romania, Partners: IRCEM, ADR VEST
- 7 Spain, Partner: Tarragona Provincial Council
- 8 Portugal, Partner: Business Development Institute of the Autonomous Region of Madeira
- 9 Greece, Partner: Industrial Systems Institute
- 10 France, Partner: Laval Mayenne Technopole

1ST TRANSNATIONAL PARTNERS MEETING | VILNIUS, LITHUANIA

➤➤➤ 29.08.23 | 30.08.23

Mantas Vilyis, Director of LIC, extended a warm welcome, setting the stage for a day of fruitful collaboration. Umberto Pernice, an External Expert hailing from Region Västerbotten, provided a captivating introduction to the 1st Interregional Exchange Meeting. Justinas Didika, Head of ManuFuture Department at the Innovation Agency, shared valuable insights into Lithuania's progressive policies in the context of green growth, igniting discussions on sustainable futures. Followed by Povilas Bacevičius, LIC expert, who dived deep into the Industry Digitalization Index of Lithuania, offering a comprehensive view of digital landscape and opportunities for growth. After that, Gintaras Vilda, CEO of Manufacturing Innovation Valley, inspired us with innovative good practices from Lithuania, showcasing how innovation and sustainability go hand in hand. Then partners honed their skills with an insightful training session on MIRO, a collaborative online platform that fosters creativity and cooperation. Engagement soared as our partners actively participated in presentations and roundtable discussions, delving into the analyses conducted by the team, dissecting data for a brighter future. Lastly, the Interregional Multistakeholder Group (MSG) convened, sharing stakeholder presentations and exchanging thoughts on expectations and best practices from various regions, uniting for a common goal.

We kicked off the second day with a debrief led by Umberto Pernice. Together, we delved into the valuable lessons learned on Day 1 and explored how these insights can shape our future activities. Followed by a presentation of the communication activities, led by our Communication Manager - Silvia Stumpf. Then all partners took the stage to provide concise 3-minute updates on their Semester 1 activities. After that partners discussed next steps for Semester 2 and important information regarding reporting. The event ended with a steering committee meeting.



DIGITAL INNOVATION AND CIRCULAR ECONOMY ECOSYSTEMS ANALYSIS FROM ALL PARTNER'S REGIONS

»»» SWEDEN



1. Digital innovations and digitalization in the region:

Västerbotten, a highly innovative region in the EU, is well-prepared for digitalization with strong broadband coverage, connectivity, and a skilled population. Collaboration among municipalities, academia, and businesses has led to a robust broadband network and a shared service development platform. The regional digitalization strategy aims to align digitalization with strategic goals and priorities, recognizing its pivotal role in achieving these objectives. The strategy development process involved contributions from academia, the public sector, business, and the nonprofit sector, building upon the regional innovation strategy.

THE INTERACTION BETWEEN THE DIGITAL DEVELOPMENT AND THE CIRCULAR ECONOMY IS EXPRESSED IN THE REGIONAL STRATEGIES.

2. Circular Economy

Västerbotten is at the forefront of the circular economy movement in Sweden, driven by a strong tradition of innovation and entrepreneurship. The region is committed to sustainability and experiences high demand for sustainable products and services, creating substantial potential for circular business models. The Regional Innovation Strategy focuses on aligning with sustainability goals, emphasizing the importance of circularity in Västerbotten's development.

Efforts are concentrated on promoting the green transition, particularly through sustainable energy systems, including hydropower and wind power. Västerbotten's university is actively engaged in research and development in areas such as alternative fuels and energy. The mining and minerals sector holds promise for innovations in green transition and circular value chains, especially as metals and minerals are critical components in sustainable technologies.



1. Digital innovations and digitalization in the region:

While Lithuania's manufacturing sector's digitalization level is moderate in the EU, efforts are underway through the Programme for Economic Transformation and Competitiveness Development. One of its measures, "Encourage enterprises to digitize," focuses on promoting digitalization among SMEs by enhancing digital competences, automating production processes, and offering financial incentives for RPA and AI solutions development.

Lithuania excels in cloud computing, IoT, and artificial intelligence but lags behind in areas like big data analytics, 3D printing, and robotics compared to the EU average. The most digitized sectors are in engineering, including mechanical and electrical engineering, machinery, electronics, metal electronics, metal products, and metalworking. The program's implementation falls under the Ministry of Economy and Innovation's purview.

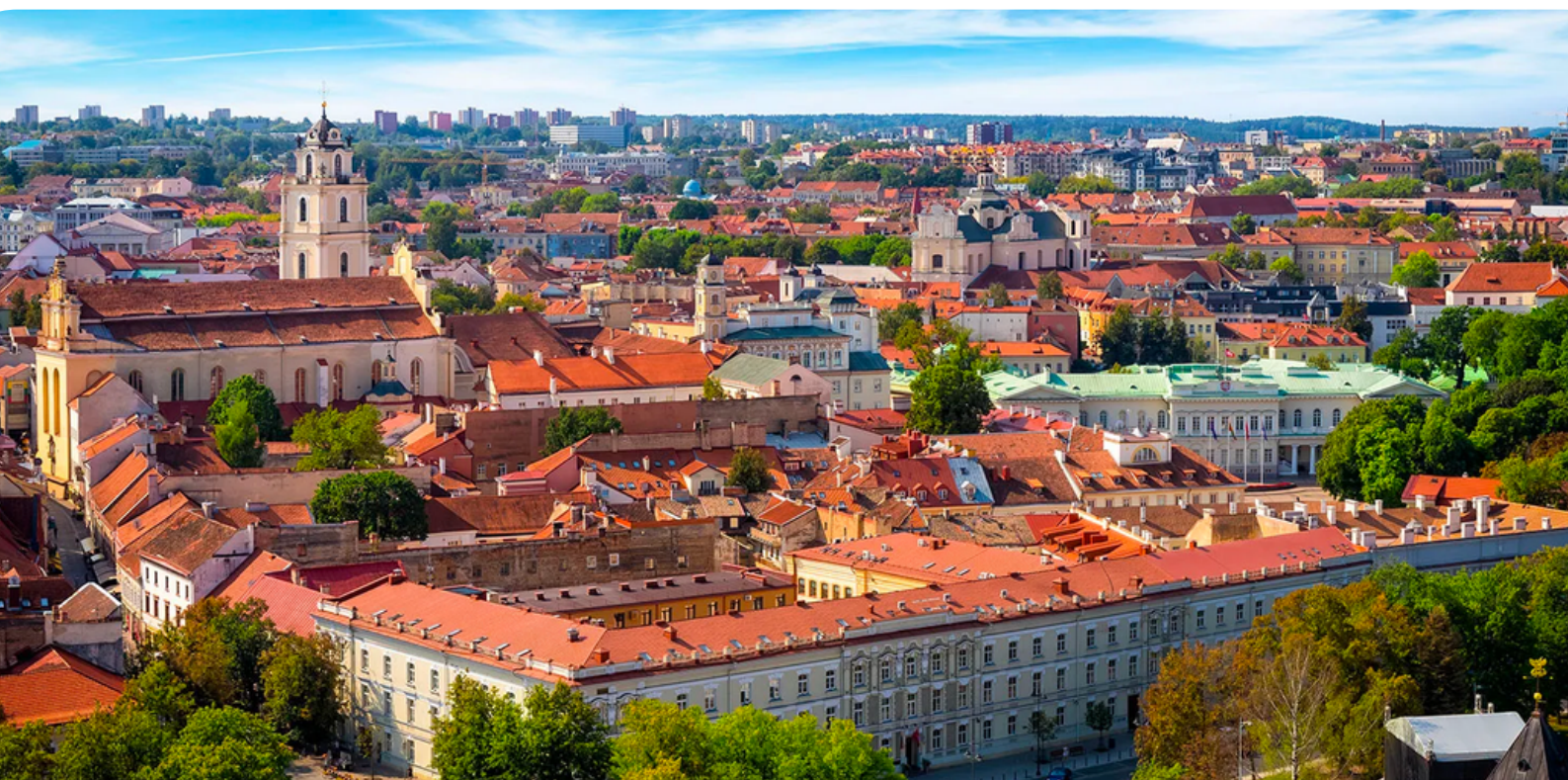
**THE DIGITAL
TRANSFORMATION
TOWARDS CIRCULAR
ECONOMY IS RELEVANT
FOR ALL INDUSTRY
SECTORS.**

2. Circular Economy

In 2023, Lithuania adopted the Roadmap for a Circular Economy by 2035, emphasizing six key areas: industry, construction, bioeconomy, transport, waste management, and consumption, with over 213 million EUR allocated for investment and regulatory measures. This move addresses Lithuania's need to catch up with the EU in transitioning to a circular economy, as local companies, especially in manufacturing, focus on resource efficiency but overlook social aspects, knowledge sharing, and broader cooperation.

Lithuania currently lags behind the EU in circular material use and efficiency, with a stable circular material use rate of 4 compared to the EU's 11.7 in 2021. However, the country excels in recycling waste and creating value and jobs in circular economy-related sectors.

Positive examples include a cement manufacturer partnering with water treatment companies to use waste sludge as fuel and a fertilizer manufacturer's innovative solutions that reuse waste heat, benefiting regional cities.



1. Digital innovations and digitalization in the region.

The Regional Council co-ordinates a four-year strategy for the region and, under the strategy, grants the European Union's regional development funds (ERDF) together with Harne ELY Centre. The Paijat-Hame Regional Strategy 2022-2025 includes the S3 - Smart Specializations Strategy. Renewal and attractiveness are the main priorities of the programme. Renewal in Paijat-Hame means for example that so called "old industries" and old production methods must be renewed to become more sustainable. Attractiveness means actions that promote sustainable and good living for all. Smart specialization spearheads are Sports, Food and beverage and Manufacturing. Sustainability is a cross-cutting principle of the spearheads. {Paijat-Hameen maakuntastrategia 2022-2025) Other key development programs as Rural Development Programme for Mainland Finland, Harne countryside development program, Leader-programs, all consider green transition and digitality, but are not in focus in the CEI BOOST project.

2. Circular Economy.

In a national-level report, it has been highlighted that the circular economy, digitalization, and the synergies between them are still in the early stages of development.

Despite Finland's robust expertise in both the circular economy and digitalization, there is a notable shortage of experts who possess mastery in both domains. Circular economy solutions face scalability challenges within the business sector due to limited cooperation between companies and industries, resulting in siloed approaches.

Several challenges associated with the circular economy from the perspective of digitalization include issues with business models, ownership of information, data sharing, data integration, collaboration, and skill requirements. These challenges underscore the need for comprehensive strategies to address the intersection of circular economy and digitalization for more effective and sustainable outcomes.

THERE IS STRONG NEED FOR COMPREHENSIVE STRATEGIES TO ADDRESS THE INTERSECTION OF CIRCULAR ECONOMY AND DIGITALIZATION FOR MORE EFFECTIVE AND SUSTAINABLE OUTCOMES.



1. Digital innovations and digitalization in the region:

Bulgaria has witnessed significant progress in digital innovations and digitalization. The country has been actively investing in its digital infrastructure, expanding broadband connectivity, and fostering a thriving tech ecosystem. Sofia, the capital city, has emerged as a growing tech hub, attracting startups and IT companies.

Moreover, Bulgaria has made strides in e-government services, simplifying administrative processes for citizens and businesses. The adoption of digital signatures and electronic identification has streamlined interactions with government agencies.

In education, there's a focus on digital literacy and promoting STEM (Science, Technology, Engineering, and Mathematics) fields to prepare a skilled workforce for the digital age. The country's commitment to digital transformation is evident in various sectors, including healthcare, finance, and industry, contributing to Bulgaria's growing prominence in the European digital landscape.

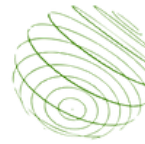
**THE SHIFT TOWARDS
DIGITAL-DRIVEN
CIRCULAR SOLUTIONS
NOT ONLY ENHANCES
RESOURCE
SUSTAINABILITY BUT
ALSO FOSTERS
INNOVATION AND
ECONOMIC GROWTH.**

2. Circular Economy:

Bulgaria is progressively embracing the concept of a circular economy and recognizing its profound connection with digitalization. The country is actively pursuing initiatives to reduce waste, promote recycling, and enhance resource efficiency. Circular economy practices are gaining traction across industries, including manufacturing, agriculture, and construction.

Digitalization plays a pivotal role in advancing Bulgaria's circular economy efforts. The integration of digital technologies such as IoT (Internet of Things), blockchain, and data analytics allows for real-time monitoring and optimization of resource utilization. Smart waste management systems, for instance, help track and manage waste streams efficiently. Furthermore, digital platforms enable businesses to engage in circular practices such as product-as-a-service models and sharing economies. This shift towards digital-driven circular solutions not only enhances resource sustainability but also fosters innovation and economic growth.





1. Digital innovations and digitalization in the region:

Based on the 2022 Digital Economy and Society Index (DESI), Romania ranks 27th out of the 27 EU member states. The country's performance in terms of the maturity of digital technologies and digital public services is poor compared to other EU Member States. The share of SMEs that have at least a basic level of digital intensity (22 %) and the percentage of businesses that exchange information electronically (17 %) are the lowest in the EU. The low level of digitization and relatively slow progress prevent Romania's economy from taking full advantage of the opportunities offered by digital technologies.

**TO FULLY UNLOCK THE
CIRCULAR ECONOMY
POTENTIAL, ROMANIA
AND OTHER REGIONS
REQUIRE A SUPPORTIVE
POLICY FRAMEWORK.**

2. Circular Economy

Despite some economic progress in the past decade, Romania's economic growth is not yet decoupled from the generation of waste. In addition, waste management in Romania significantly lags behind, as landfilling, and often illegal dumping, is still the dominant form of waste management. However, Romania, with one of the lowest and declining waste generation per domestic material consumption among the EU countries, has favourable prospects for improving the country's performance in adopting CE practices. It can be concluded that Romania has significant potential for improvement across all stages of CE, from higher resource efficiency and use of secondary materials in production to waste prevention and better waste management.

Digitalization can play a crucial role in advancing the transition to a resource-efficient and circular economy by addressing market failures. It enhances the business case for circular economy initiatives by generating valuable data, information, and knowledge. This, in turn, opens doors to new circular business models. However, to fully unlock this potential, Romania and other regions require a supportive policy framework.



1. Digital innovations and digitalization in the region:

The Tarragona Provincial Council (DIPTA) plays a pivotal role in driving the digital transformation of Southern Catalonia, encompassing the Tarragona province, the second most populous in Catalonia with nearly 1 million residents. This transformation aims to position the region as an attractive hub for business, culture, and tourism, fostering balanced and sustainable economic growth.

DIPTA is actively digitalizing its administration and supporting municipalities in the region in their digital endeavors. The maturity of digitalization in the Tarragona province can be considered slightly below the Catalan average: only 1% out of the 25.000 companies located in Tarragona are ICT related companies. Main categories include software development companies, IT services, virtual reality, digital consulting, e-safety. Digital transformation of companies in the Tarragona province is low, according to experts, even if at Catalan level is above the EU average.

THE SECTORS IN WHICH DIGITALISATION CAN HAVE A HIGHER IMPACT IN BOOSTING CIRCULAR ECONOMY SOLUTIONS IN TARRAGONA ARE THE AGRIFOOD SECTOR AND TOURISM.

2. Circular Economy

The status of CE in Tarragona region is still in its initial phase. According to the certification company AENOR, only two companies have a circular economy certification. Then, there are 23 companies which count with the more general AENOR certifications in the Environmental Management category and 24 companies have obtained EMAS certification.

Specifically, certificates are most prominent among service companies (36%), followed by the manufacturing industry and the transportation and storage, both with 18% each. To a lesser extent, commerce (9%), and the primary sector and construction, both with 2% each.

The sectors in which digitalisation can have a higher impact in boosting circular economy solutions in Tarragona are the agrifood sector and tourism. Traditional companies in these and other sectors are using technologies to implement CE solutions but it is not yet a widespread situation.



1. Digital innovations and digitalization in the region:

The Autonomous Region of Madeira (RAM) is actively promoting digital innovation to bridge the gap between research and the market. They've established the Smart Islands Hub (SIH), a Digital Innovation Hub (DIH), to empower the Madeiran population and assist SMEs and public sector organizations in adopting advanced digital technologies. Led by ARDITI, a consortium of 8 partners is driving this initiative.

The SIH will facilitate the creation of new Digital Business Models for SMEs and support Circular Economy initiatives leveraging digital technologies. The region's current digitalization level is not well-documented, but the SIH aims to assess digital maturity using the European Commission's methodology. The digital transformation of companies presents opportunities for growth, knowledge, and new professions. Technologies like 5G, Blockchain, IoT, Big Data, and AI are seen as vital for economic recovery, addressing societal challenges, and combating climate change in an ultra-peripheral region like Madeira.

**DIGITALIZATION IS
EMPOWERING THE CIRCULAR
ECONOMY IN MADEIRA,
ACCELERATED BY THE
PANDEMIC-INDUCED SHIFT
TOWARDS REMOTE-WORKING
AND THE ADOPTION OF NEW
TECHNOLOGIES BY THE
PUBLIC ADMINISTRATION,
COMPANIES, AND
ORGANIZATIONS.**

2. Circular Economy

In 2021, Madeira developed the Regional Circular Economy Agenda and Waste Strategy to boost resource efficiency. These initiatives are overseen by the Regional Secretariat for the Environment.

The Circular Economy Agenda aligns with EU and national policies and focuses on three objectives: reducing material consumption, increasing economic productivity, and boosting waste valorization.

The Waste Strategy aims to increase waste management self-sufficiency through prevention and technical solutions.

Key sectors for circular practices in Madeira include Tourism, Construction, Agri-food, Sea, Retail, and Social Institutions. Local businesses lead in circular practices, forming symbiotic networks.

The Madeira Circular Platform showcases regional examples, which have grown by 60% in 2021, highlighting the region's commitment to circular principles.



1. Digital innovations and digitalisation in the region:

The region is committed to integrating Industry 4.0 practices and building a skilled workforce, with investments in digital production equipment. RWG aims to become a smart and innovative European hub, particularly in Agrofood, Tourism & Culture, and Advanced Materials sectors. Their mission is to establish a digital innovation hub to support this transformation.

**EFFORTS TOWARDS
DIGITALIZATION AND
BOOSTING CE HAVE
FOCUSED ON ENERGY,
MOBILITY, AGRIFOOD,
ENVIRONMENTAL
PROTECTION, AND WASTE.**

2. Circular Economy

RWG's "Regional Annual Action Plan" focuses on promoting a circular economy, particularly through the Regional Operational Programme (ROP). They've created guides on E-Mobility, Circular Economy, and Smart Industry to consolidate knowledge and experience in the region. R&D projects align with RWG's Smart Specialization Strategy (RIS3), notably in "Strengthening green businesses & recycling" in Western Greece. Examples include an industrial unit reusing coffee residue, waste management initiatives, a Climate Change Adaptation Plan, and support for sustainable urban mobility like electric buses. RWG's goals include enhancing waste sorting, recycling, and waste prevention, in line with the Regional Waste Management Plan.



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➤➤➤ #STAY TUNED

Semester 1 has been a journey filled with insights and achievements, and we're excited to share more with you in the coming months.

Stay tuned for updates on our project's progress, as we delve deeper into the realms of digitalization and circular economy. Together, we're shaping a sustainable future and driving innovation in these crucial areas.

Don't miss out on our upcoming activities, milestones, and valuable insights. Follow us on our digital channels to stay informed and engaged in our mission.

Thank you for being a part of our journey towards a more sustainable and digitally empowered future!

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