



DELIVERABLE 1.6

Final scientific outreach event

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Jovanovic, M., Giorgi, S., & Krey, V. (2026). Final scientific outreach event (CircEULAR Deliverable 1.6).



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CircEULAR

Developing circular pathways for a EU low-carbon transition

Deliverable number	1.6
Deliverable name:	Final scientific outreach event
WP / WP number:	Stakeholder Engagement and Outreach / 1
Delivery due date:	31/August/2026
Actual date of submission:	31/August/2026
Deliverable description:	Final scientific outreach event (M48, based on Task 1.5)
Dissemination level:	Public
Lead author(s):	Marina Jovanovic (IIASA), Sara Giorgi (T6 Ecosystems)
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Internal reviewers:	Antonella Passani (T6 Ecosystems), Eugénie Joltreau (CMCC)

Version log

Version	Date	Issued by	Description	Summary of changes
1	25.08.2026	Marina Jovanovic	First draft	n/a
2	31.08.2026	Marina Jovanovic	Revised final version	Revised to incorporate internal review comments; finalised for submission



Executive Summary

On May 28, 2026, the Horizon Europe projects CircEULAR, [CIRCOMOD](#) and [CO2NSTRUCT](#) hosted their joint final scientific outreach even in Brussels, titled: “*Modelling to Policy: Circular Economy Pathways Towards Net-Zero*”. The high-level conference attracted over 160 participants, with 72 participating in person and 90 joining remotely, representing policy institutions, research organisations, industry and civil society. Designed to bridge evidence-driven circular economy insights with policy priorities, the event created an interactive forum for exchange across construction, mobility, housing, digitalisation, behaviour and rebound effects. Rather than simply presenting project results, the event invited participants to explore assumptions, question modelling choices and reflect on what circular economy pathways mean for real-world policy implementation.

Keywords

Stakeholder engagement, policy dialogue, science-policy interface, policy levers



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Abbreviations

AI	Artificial intelligence
CCS	Carbon capture and storage
CircEular	Developing circular pathways for a EU low-carbon transition
CIRCOMOD	Circular Economy Modelling for Climate Change Mitigation
CO2NSTRUCT	Modelling the role of circular economy construction value chains for a carbon-neutral Europe
DG	Directorate-General
EPBD	Energy Performance of Buildings Directive
EU	European Union

Final scientific outreach event

1. Introduction

Building on D1.2 Final Report on Community Building and Events¹, this deliverable report presents a comprehensive record of the Joint Final Scientific Outreach Event, titled “*Modelling to Policy: Circular Economy Pathways Towards Net-Zero*,” held on May 28, 2026, in Brussels. Organised as part of CircEULAR’s policy dialogue activities, this document serves to synthesise the critical dialogue between researchers, policymakers (especially from EU institutions), industry, and civil society stakeholders. The primary objective of this event was to bridge evidence-driven circular economy insights with policy priorities required to achieve the European Green Deal's net-zero objectives. It documents the consensus, debates, trade-offs and research gaps identified during the event's plenary sessions and breakout groups. The event agenda is included in Annex 1.



1.1 Policy Contextualisation

The opening session of the final event started with a high-level policy contextualisation from two eminent external keynote speakers: William Neale, Adviser on Circular Economy at the European Commission’s Directorate-General for Environment (DG-ENV), and Vicky Pollard, Head of Unit for Foresight, Economic Analysis and Modelling at the Directorate-General for Climate Action (DG CLIMA). Both speakers highlighted why modelling is essential to current policy design. Their contributions and the subsequent discussions underlined that in a transition shaped by uncertainty, competing priorities and fast-moving policy agendas, modelling can help clarify where circular strategies are likely to deliver the greatest impact, where trade-offs may arise, and where further evidence is needed before action can be scaled.

1.2 Joint Pathways and Modelling Assumptions

A joint presentation by the three sister projects detailing circular economy pathways to net-zero initiated an active discussion on how various circular strategies are interpreted, classified and compared across models. Stakeholders pointed out that in some project results, 'narrowing'

¹ Giorgi, S., Passani, A., Krey, V., and Jovanovic, M. (2026). Final Report on Community Building and Events (CircEULAR Deliverable 1.2). <https://circeular.org/project-reports/>



strategies appeared to deliver the strongest impacts, while in others, 'slowing' strategies played a more prominent role.

The discussion revealed that these variances often depend on specific modelling assumptions, including whether lifetime extension is applied to new or existing materials and assets, the degree to which the assumed adoption rates of narrowing practices are anchored in empirical citizen survey data, and how specific practices, such as material substitution, are categorised within different modelling architectures.

The overarching analytical takeaway from this joint session was clear: the overall evidence for circular economy action on climate mitigation is strong, but detailed results need to be interpreted and contextualised carefully, with close attention to assumptions, implementation pathways and social feasibility.

1.3 High-Level Policy Exchange

The subsequent high-level policy exchange panel shifted the focus of the discussion from modelling results to concrete policy choices. The high-level policy exchange panel adopted a dynamic format, pairing short evidence-based interventions from researchers with immediate reactions from external policy experts. Three thematic exchanges were organised:

- **Construction ecosystem:** Pierluigi Zerbino (CO2NSTRUCT), followed by a policy response from **Ruben Bibas (OECD)**.
- **Service-focused measures:** Patrícia Fortes (CIRCOMOD), followed by a policy response from **Josefina Lindblom (DG ENV, European Commission)**.
- **System-wide enablers:** Yee Van Fan (CircEUlar), followed by a policy response from **Mihai Palimariciuc (DG EMPL, European Commission)**.

This format enabled each external panellist to respond directly to the research presented and relate the findings to current policy developments, priorities and implementation challenges, before opening the discussion to the wider audience.

When asked to identify single priority policy levers, panellists debated end-of-use practices – such as selective demolition, deconstruction and the conditions needed to retain material value – versus optimising the in-use phases of buildings. The panel emphasised the need to maximise the utility of our existing buildings stocks (focusing on right-sizing rather than down-sizing), to mitigate embodied emissions and to expand beyond decarbonisation to wider life-cycle impacts such as waste prevention and reduction, land use and water use.

Furthermore, the panel examined the business case for circularity, exploring how costs and benefits are shared across value chains, how early implementation costs can transition to cost-neutrality over time, and how capacity building, workforce upskilling, fiscal incentives and the policy sequencing can support circular practices at scale.

Finally, the discussion drew a clear boundary between the direct environmental impacts of digital infrastructure - such as the electricity and resource consumption of data centres - and the potentially larger, indirect consequences stemming from rebound effects and shifting consumption behaviours across buildings, transport and industry. The panel noted that while the growth of robotics and AI present more opportunities, they also introduce substantial new demands for materials.



Following these high-level insights, the event transitioned into targeted deep-dives to examine sector-specific findings and key messages.

2. Thematic Breakout Deep-Dives

To foster focused discussions, the event convened three thematic breakout groups. These sessions allowed participants to, first, hear findings from a series of presentations and then dissect findings and implementation realities across key resource-intensive areas through facilitated discussions. The exchanges during these sessions underscored that the effectiveness of circular economy measures depends not only on the interventions themselves but also on geographical, timing and structural factors. The discussions also emphasised the importance of data availability, policy sequencing, robust governance, professional training and the alignment of circular practices with broader climate policy. Furthermore, the sessions highlighted the complementary insights generated by different modelling approaches and demonstrated the value of combining different analytical perspectives when assessing circular economy transitions.

2.1 Construction Ecosystem: Material Value Chains, Built Assets and Infrastructure

The breakout session on construction ecosystems, led by CO2NSTRUCT, emphasised that construction demand for buildings and mobility infrastructure will continue to grow both in the EU and globally, with the material intensity associated with the maintenance and replacement in mobility infrastructure remaining heavily underappreciated. Participants highlighted that circular economy strategies can substantially reduce material demand and emissions, though their effectiveness depends strongly on where, when, and how they are implemented.

During the session, strategies aimed at 'Narrowing' and 'Slowing' pathways were identified as currently delivering the highest benefits. In contrast, 'Closing' strategies can introduce trade-offs, including high transport requirements, increased energy use, and subsequent emissions. For mobility infrastructure, the most effective mitigation potential comes from stabilising demand through combined demand- and supply-side measures, alongside increased recycling and decarbonisation of energy systems. The panel also framed circular economy as a vital “pressure valve” that may reduce reliance on costly mitigation technologies such as carbon capture and storage (CCS), while noting that its impacts are unevenly distributed across regions and income groups. Ultimately, participants stressed that decisions on how infrastructure is built must be integrated with the design of future energy systems.

To guide future research, participants identified several research and data gaps: significant data limitations on the non-residential building stocks and construction activity, with insufficient understanding of how much is built and renovated annually in the EU; limited knowledge on the evolving costs of circular economy options under uncertain future conditions; a lack of standardised definitions for circular economy measures (e.g., whether demand-reduction strategies like energy efficiency should be categorised under 'Refuse' approaches); and the need for deeper analysis of how circular economy pathways may affect global trade dynamics and the competitiveness of EU industry.

2.2 Service-Focused Measures: Mobility and Housing

The service-focused session, led by CIRCOMOD, examined how innovative service-oriented approaches in mobility and housing can contribute to achieving net-zero emissions while maintaining a high standard of living. Findings from the three projects demonstrated that substantial structural changes in how services are delivered via buildings and vehicles are entirely



possible across many EU member states without compromising citizen well-being. This shift offers significant opportunities to reduce resource dependency, especially in sectors where primary material production remains highly difficult to decarbonise.

The session analysed how service-oriented innovations, such as shared mobility, improved housing utilisation, and more efficient use of built assets, not only lower the demand for primary materials but unlock significant societal co-benefits. These include freeing up valuable urban space, strengthening Europe's strategic autonomy through reduced reliance on imported raw materials, and increasing capacity to independently support the energy transition and resilience objectives. However, the discussion emphasised that robust policy frameworks are a prerequisite for positive outcomes. For instance, the introduction of automated mobility could either reduce resource use and congestion or conversely lead to a surge in traffic volumes, depending on regulatory frameworks and policy choices. To better assess realistic implementation potential and support effective adoption of service-focused circular economy measures, future work must focus on securing high-resolution datasets and ensure alignment with upcoming policy initiatives, such as the Energy Performance of Buildings Directive (EPBD).

2.3 System-Wide Enablers: Digitalisation, Behaviour and Macroeconomic Rebound Effects

Led by CircEular, this breakout session explored digitalisation, citizen behaviour, macroeconomic impacts and rebound effects as cross-cutting factors influencing circular economy transitions.

2.3.1 The Dual Role of Digitalisation

The session examined the complex, double-edged role of digitalisation. While participants recognised that digital technologies can support circular economy strategies through improved information flows, product tracking and resource optimisation, they also highlighted that the physical infrastructure supporting these technologies has an extensive ecological footprint. Participants paid close attention to the substantial energy, water and material demands of expanding data centres. They stressed that increasing reliance on renewable electricity does not remove these wider impacts and highlighted the need for stronger synergies between digitalisation policy and climate policy. Discussions also raised questions regarding how the societal benefits of digital technologies should be assessed alongside their environmental footprint and whether existing policy frameworks and governance strategies adequately capture these trade-offs.

2.3.2 Framing and Targeting Behavioural Policies

The discussion on citizen behaviour highlighted the importance of framing and targeting policy interventions appropriately. Participants suggested that policy approaches often focus on encouraging behavioural change amongst reluctant groups, whereas greater attention could be given to supporting and scaling practices already willingly adopted by citizens, such as community-based sharing, reuse and alternative consumption models. Furthermore, the discussion emphasised that behavioural adoption is deeply shaped by local infrastructure, cultural norms and socioeconomic conditions. Therefore, policy design must be tailored to regional realities rather than assuming uniform behavioural patterns across all Europe.

2.3.3 Macroeconomics and Rebound Dynamics

The macroeconomics discussion explored whether fiscal policy could play a larger role in incentivising desirable behaviours and internalising unintended consequences associated with circular economy measures. Moreover, the discussions challenged the prevailing view that all rebound effects are undesirable. While some rebound effects may erode environmental gains,



others can generate positive outcomes, such as regional employment, industrial innovation and improved welfare benefits. This distinction highlights the need for policy frameworks and modelling approaches that can classify different rebound dynamics and assess their broader social, economic and environmental implications. Finally, participants raised the issue of global spillover effects, noting that European circular economy policies can generate impacts beyond EU borders through international trade and global value chain.

3. Conclusion and Strategic Outlook

Reflections emerging from CircEULAR's policy dialogue activities, especially the final event on May 28, 2026, in Brussels, highlighted the importance of strengthening the connection between modelling evidence and policy implementation. Discussions repeatedly emphasised that while modelling can provide valuable insights into the potential contribution of circular economy strategies to climate mitigation, policymakers require a clear understanding of underlying assumptions, implementation conditions, trade-offs and uncertainties to translate analytical findings into effective action. During these sessions, participants stressed that modelling results should therefore be interpreted not as predictions, but as evidence that can inform decision-making under conditions of uncertainty.

Furthermore, the discussions reinforced the importance of broadening the policy conversation around circularity across Europe. While circular economy discussions often focus primarily on recycling and waste management, the evidence presented throughout the event highlighted the significant role that sufficiency measures, service-based approaches, lifetime extension, digitalisation and behavioural change can play in reducing material demand and emissions.

The collaborative final event also demonstrated both the value and the challenges of bringing together different modelling communities. While each of the three sister projects - CircEULAR, CIRCOMOD and CO2NSTRUCT - was designed with distinct objectives, modelling assumptions, research methodologies and scales of analysis, participants noted that closer coordination and synthesis of results could help strengthen future policy messages. By combining macroeconomic models, system-oriented models and material flow models, the joint initiative illuminated different aspects of circular economy transitions and their implications for policy. A clear strength of this collaboration was the direct sharing of data and building on common evidence sources – including datasets on the European building stock - which substantially improved consistency across all three projects. Rather than producing a single answer, these complementary perspectives provide a richer and more nuanced foundation for policymakers, helping to illuminate different pathways, trade-offs and implementation challenges. However, discussions also highlighted that data availability remains a major constraint for future modelling and policy design, particularly regarding material use, activity levels, building stocks and product lifetimes.

Ultimately, the event reinforced the need for continued dialogue between research and policy communities as Europe seeks to translate circular economy ambitions into effective pathways towards net-zero. Within the CircEULAR project, the structured policy dialogue - embedded throughout the research lifecycle rather than being addressed only at the final dissemination stage - ensured that practical implementation factors informed the modelling work from its inception. By maintaining this bidirectional exchange, the consortium was able to test the relevance of its findings and stay aligned with EU priorities. This engagement directly supported the series of



Policy Briefs and recommendations (Deliverable 1.3²), increasing the potential for project findings to contribute to future European policy development.

² Giorgi, S., Passani, et al. (2026). CircEular policy recommendations to smooth circular economy for climate change mitigation (CircEular Deliverable 1.3). <https://circeular.org/project-reports/>



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Annex 1: Final scientific outreach event – Agenda

28 May 2026, 13:00 - 18:00 (CEST)
 Thon Hotel EU, Brussels

Modelling to Policy: Circular Economy Pathways Towards Net-Zero

From 13:30 to 15:20 (CEST)

13:00 MEET AND GREET

ROOM
FRANCE

13:30 ADVANCING THE MISSION TO NET-ZERO: CIRCULAR ECONOMY POLICY CONTEXT AND PRIORITIES

A brief introduction to the policy context and the day's discussions.

- William Neale - Adviser on Circular Economy, DG ENV - European Commission
- Vicky Pollard - Head of Unit for Foresight, Economic Analysis & Modelling, DG CLIMA - European Commission

OPERATIONALISING AND SCALING CIRCULARITY: A MULTI-SCALE MODELLING APPROACH TO NARROW, SLOW, AND CLOSE PATHWAYS TO NET-ZERO

A session tracing circular economy pathways from global models to EU-specific strategies to local case studies, showing how multi-scale analysis and "narrow, slow, close" practices can translate to actionable policy for achieving net-zero.

- Volker Krey - Research Group Leader and Principal Research Scholar, International Institute for Applied System Analysis (IIASA) (CircEular)
- Ana Teresa Macas Lima - Senior Researcher, Technical University of Denmark (DTU) (CO2NSTRUCT)
- Detlef van Vuuren - Professor, University of Utrecht's Copernicus Institute of Sustainable Development (UU) and PBL Netherlands Environmental Assessment Agency (CIRCOMOD)

Q&A - Discussion

ROOM
FRANCE

14:15 HIGH-LEVEL POLICY EXCHANGE PANEL

Three thematic interventions structured around a reflection on circular strategies to reach net-zero highlighting main results, key messages and policy insights, followed by an immediate institutional reaction. This session will close with an interactive discussion amongst speakers and participants.

CONSTRUCTION ECOSYSTEM

- Pierluigi Zerbino - Senior Assistant Professor, University of Pisa (UNIPi) (CO2NSTRUCT)
 - Ruben Bibas - Economist, Organisation for Economic Co-operation and Development (OECD)

SERVICE-FOCUSED MEASURES

- Patricia Fortes - Senior Researcher, Center for Environmental and Sustainability Research - NOVA School of Science and Technology and National Energy and Geology Lab (LNEG) (CIRCOMOD)
 - Josefina Lindblom - Policy Officer, Circular Economy and Secondary Raw Material, DG ENV - European Commission

SYSTEM-WIDE ENABLERS

- Yee Van Fan - Senior Researcher in Digitalisation, Circular Economy and Net Zero Energy programme, Environmental Change Institute at the University of Oxford (ECI) (CircEular)
 - Mihai Palimariciuc - Team Leader Fair Green and Digital Transitions, Research, DG EMPL - European Commission

Q&A - Discussion

15:00 COFFEE AND NETWORKING



From 15:20 to 18:00 (CEST)

15:20 THREE PARALLEL BREAKOUT GROUPS

Participants join one of three parallel sessions which will be "deep dives" into the topics presented as teasers in the plenary session.

ROOM
NETHERLANDS 1

CONSTRUCTION ECOSYSTEM: MATERIAL VALUE CHAINS, BUILT ASSETS, TRANSPORT AND ENERGY INFRASTRUCTURE AT SCALE - LED BY CO2NSTRUCT

Facilitated by Davide Aloini - Professor, UNIPI

- Lead: Sofia Simoes - Senior Researcher, LNEG
- Contributors:
 - Dominik Wiedenhofer - Senior Research Scientist, University of Natural Resources and Life Sciences (BOKU) (CircEular)
 - Peter Berril - Assistant Professor, Leiden University (CIRCOMOD)

ROOM
NETHERLANDS 2

SERVICE-FOCUSED MEASURES: SOLUTIONS FOR MOBILITY AND HOUSING - LED BY CIRCOMOD

Facilitated by Detlef van Vuuren - Professor, UU and PBL, and Marianne Zanon-Zotin - Researcher, UU

- Leads: Stefan Pauliuk - Professor and Christian Hauenstein - Researcher, Freiburg University, and Luja von Köckritz - Researcher, UU
- Contributors:
 - Juliana Barbosa - Researcher, LNEG and Stefan Horn - Researcher, DTU (CO2NSTRUCT)
 - Mira Kopp - Doctoral Researcher, Potsdam Institute for Climate Impact Research (PIK) and Alessio Mastrucci - Senior Research Scholar, IIASA (CircEular)

ROOM
FRANCE

SYSTEM-WIDE ENABLERS: DIGITALISATION, BEHAVIOUR, ECONOMIC IMPACTS AND REBOUND EFFECTS - LED BY CIRCEULAR

Facilitated by Sara Giorgi - Senior Research, T6 Ecosystems

- Lead: Yee Van Fan - Senior Researcher in Digitalisation, Circular Economy and Net Zero Energy programme, ECI
- Contributors:
 - Theoni Oikonomou and Spyridon Karytsas - Senior Researchers, CRES - Centre for Renewable Energy Sources and Saving and Andrea Genovese - Professor, University of Salford - Manchester (CO2NSTRUCT)
 - Zoi Vrontisi - Head of Economic Analysis, E3Modelling/RICARDO (CIRCOMOD)

16:30 CLOSING PLENARY SESSION

ROOM
FRANCE

This closing session will invite feedback from all three breakout groups and indicate common key policy messages and research gaps.

17:00 DRINKS AND NIBBLES AT THE HOTEL BAR



CO₂NSTRUCT



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**Funded by
the European Union**

Project funded by



Schweizerische Eidgenossenschaft
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Confederazione Svizzera
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