

ClrCular Economy platfoRm for eurOpeaN priorities strategic agEnda - CICERONE

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About me

- PhD Chem Eng, Postgraduate School of Industrial Ecology, Post Doc – NTNU, Trondheim
- Assoc. prof. - environment (Sustainable buildings, Innovations in supply chain, Circular Economy, Life cycle assessment, etc.)
- Publications: h-10, > 1000 citations in WoS, 1 % highly cited researchers globally
- Projects: H2020; more than 25 (>15 MIO EUR), evaluator by several ministries and national agencies (Slovenia, Croatia, Poland, European Commission, EIT Urban Mobility, ...)
- European Commission: core group member for financing CE in Member States, board member in ERSCP Society (TU Delft)
- Visiting professor TU Graz
- Research interest: circular economy, LCA, sustainable production and consumption, sustainability indicators



Agenda

- BACKGROUND
- GOALS
- WP3 IMPLEMENTATION PATHWAY - RESULTS
- CONCLUSIONS

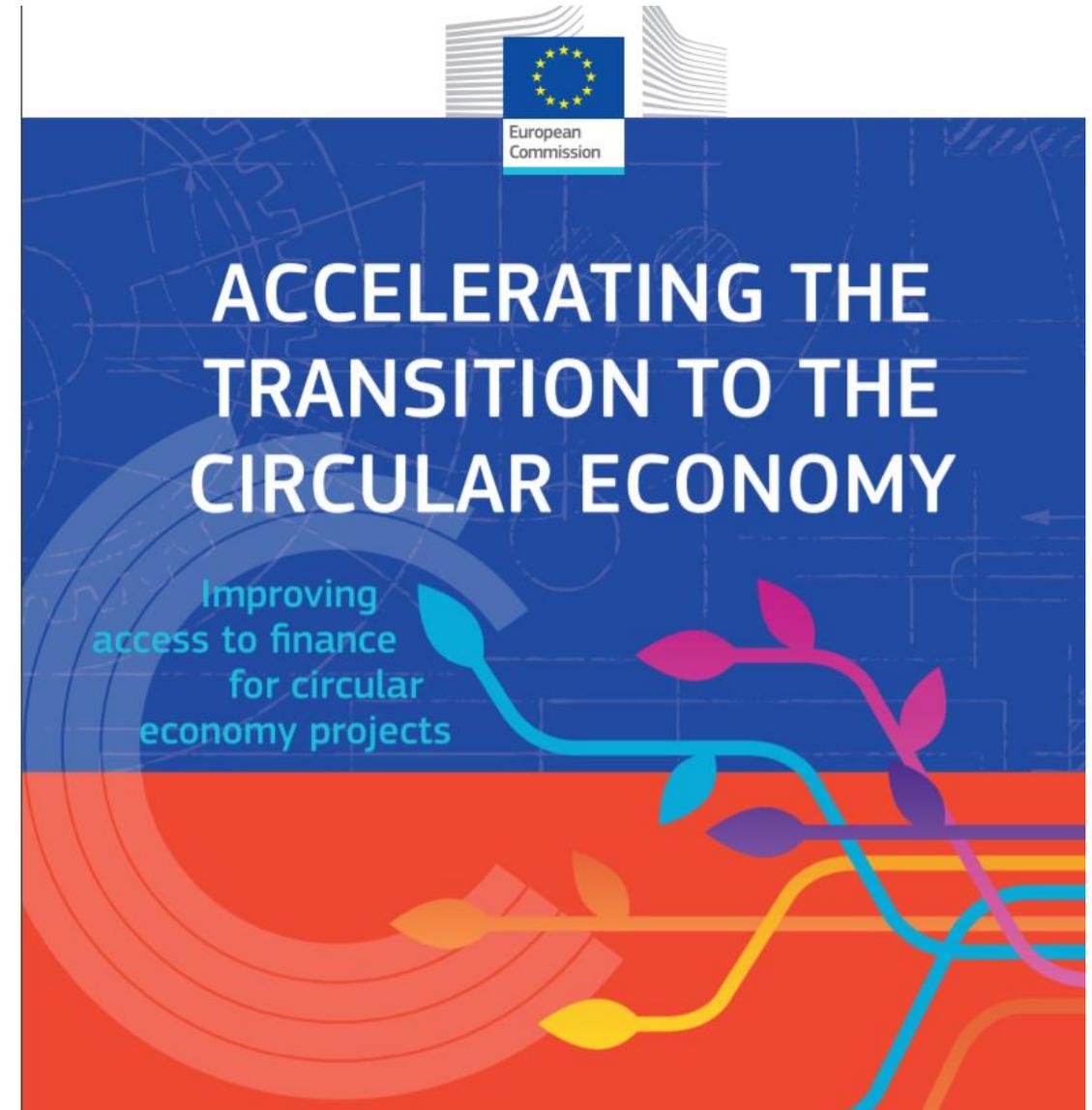
Background

- EC Action Plan (2015) – actions on specific priority themes (raw materials, food, ...), cross-cutting issues (indicators, eco-design), guidelines and regulations, financing programmes (Cohesion Funds, H2020, LIFE, ...)
- Explosion of initiatives in all MS
- Most relevant funding resource: Cohesion Funds, based on S3
- The regional investments are not fully exploited at the EU level, and progress made in R&I considering CE varies in the EU – not sufficiently promoted and replicated
- Pilot projects – are not having relevant impact due fragmentation, scarce resources in implementing international synergies

Two platforms

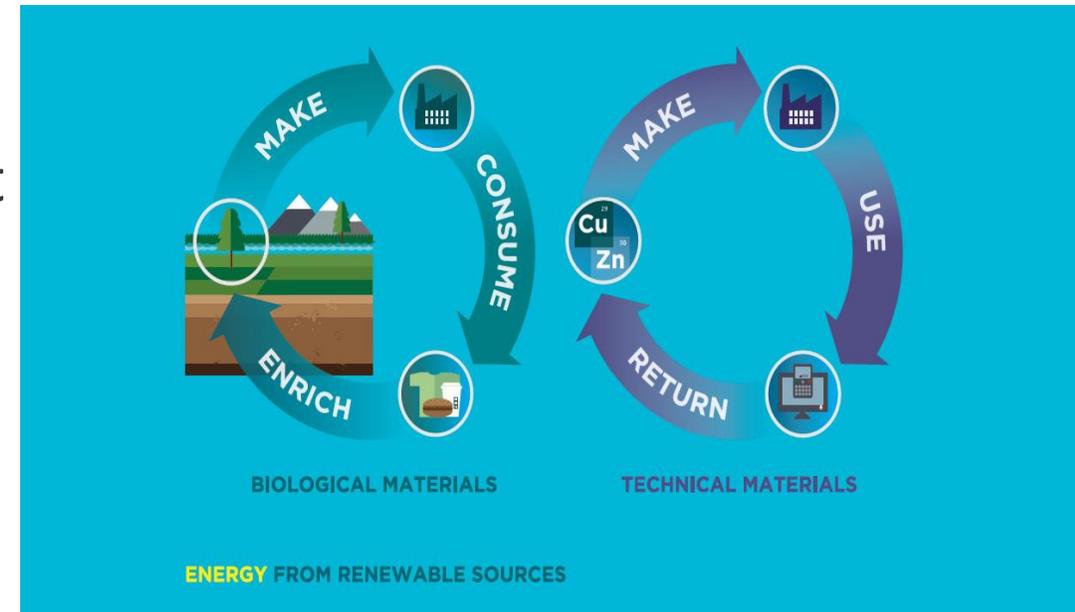
Within the **Circular Economy Action Plan**, the Commission has launched two stakeholder platforms:

- **The Platform to support the financing of circular economy** bringing together the Commission, the European Investment Bank (EIB), financial market participants and businesses to increase awareness of the circular economy business logic and improve the uptake of circular economy projects by investors;
- **The European circular economy stakeholders' platform (ECESP1)**, ran by the European Economic and Social Committee (EESC) for the development of a policy dialogue with stakeholders and the promotion of knowledge share and best practices dissemination.



Compatibility Challenges

- despite progress made CE businesses and projects still face system compatibility challenges
- In this situation of multiplying initiatives and actions at local, regional and national level, it is **necessary to avoid dispersion and duplication**.
- A SOLUTION: A reliable network of **programme owners** (“POs”) with aligned interests and homogeneous approaches and strategies.



EllenMacArthur: <https://www.ellenmacarthurfoundation.org/.../Designing-for-a-Circular-Economy.ppt>

Circular economy challenges, barriers, solutions

CICERONE challenges

Resources to develop CE are scarce and fragmented, implementing international synergies is difficult

A strategic coordination is needed to fund the future CE programs at regional, national and European levels

A tool is necessary to track progress made in the different EU research programs on CE

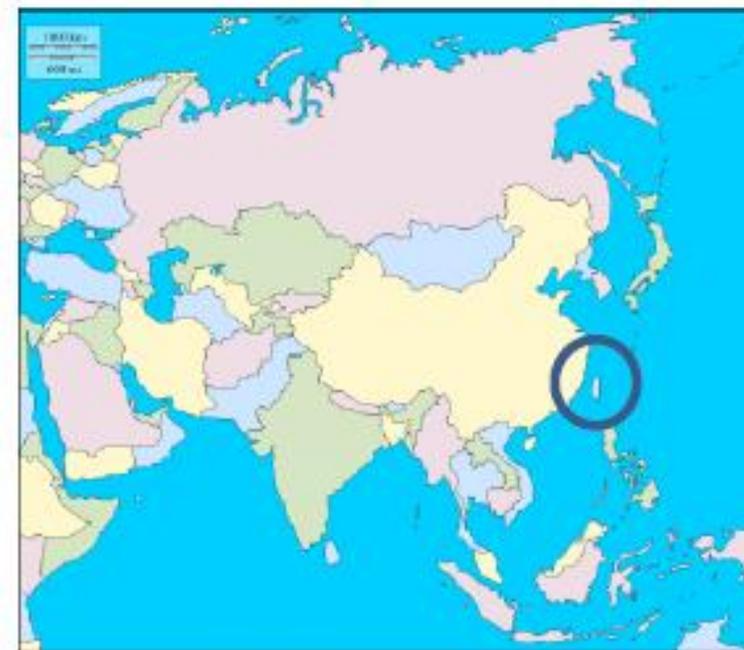
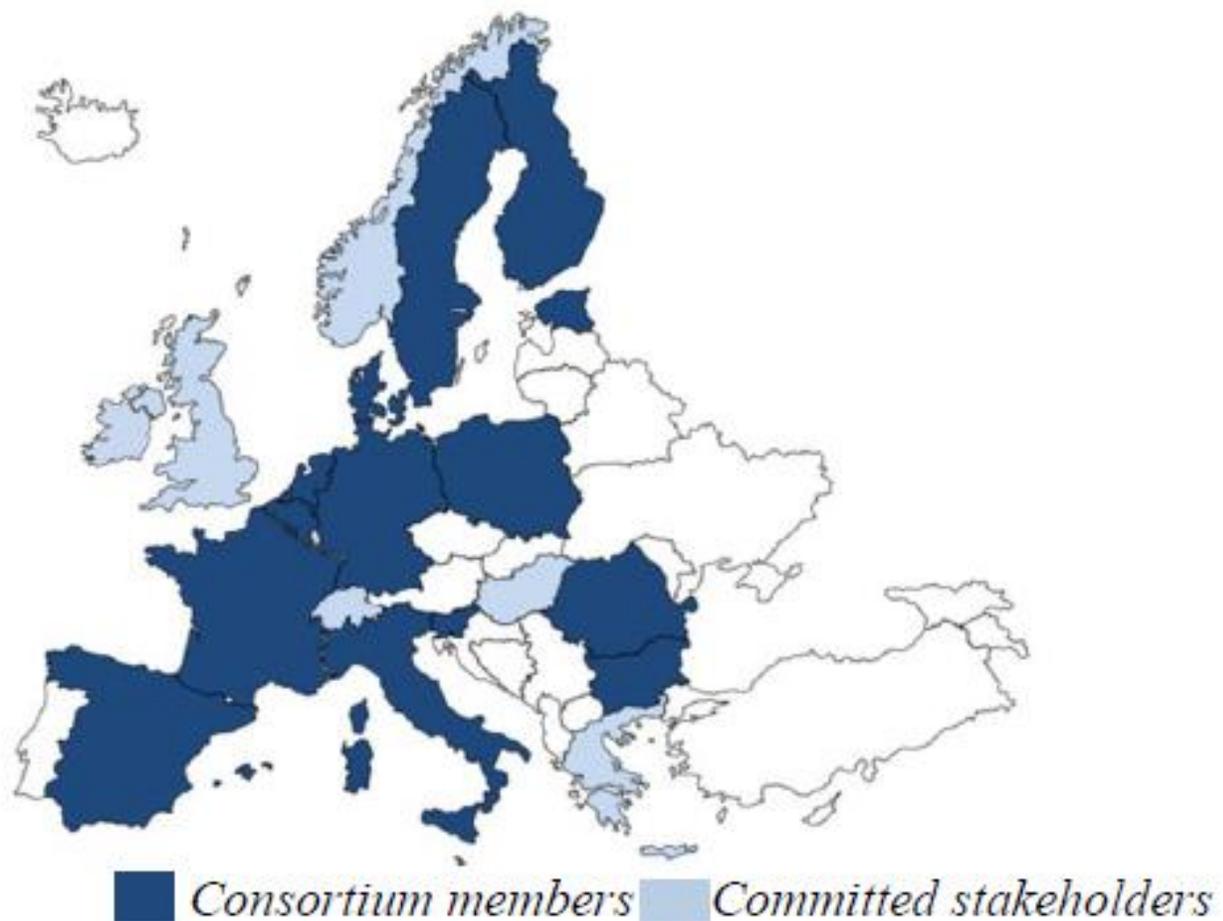
CICERONE objectives/solutions

HLO #1: Assess and benchmark current performance of C.E. R&I funding in Europe

HLO #2: Establish an efficient and inclusive mechanism to jointly define and prioritise C.E. R&I priorities at EU scale

HLO #3: Build and test a lasting organisation and pathways to reach the desired impact

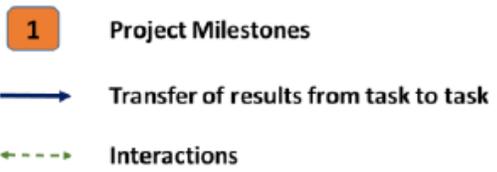
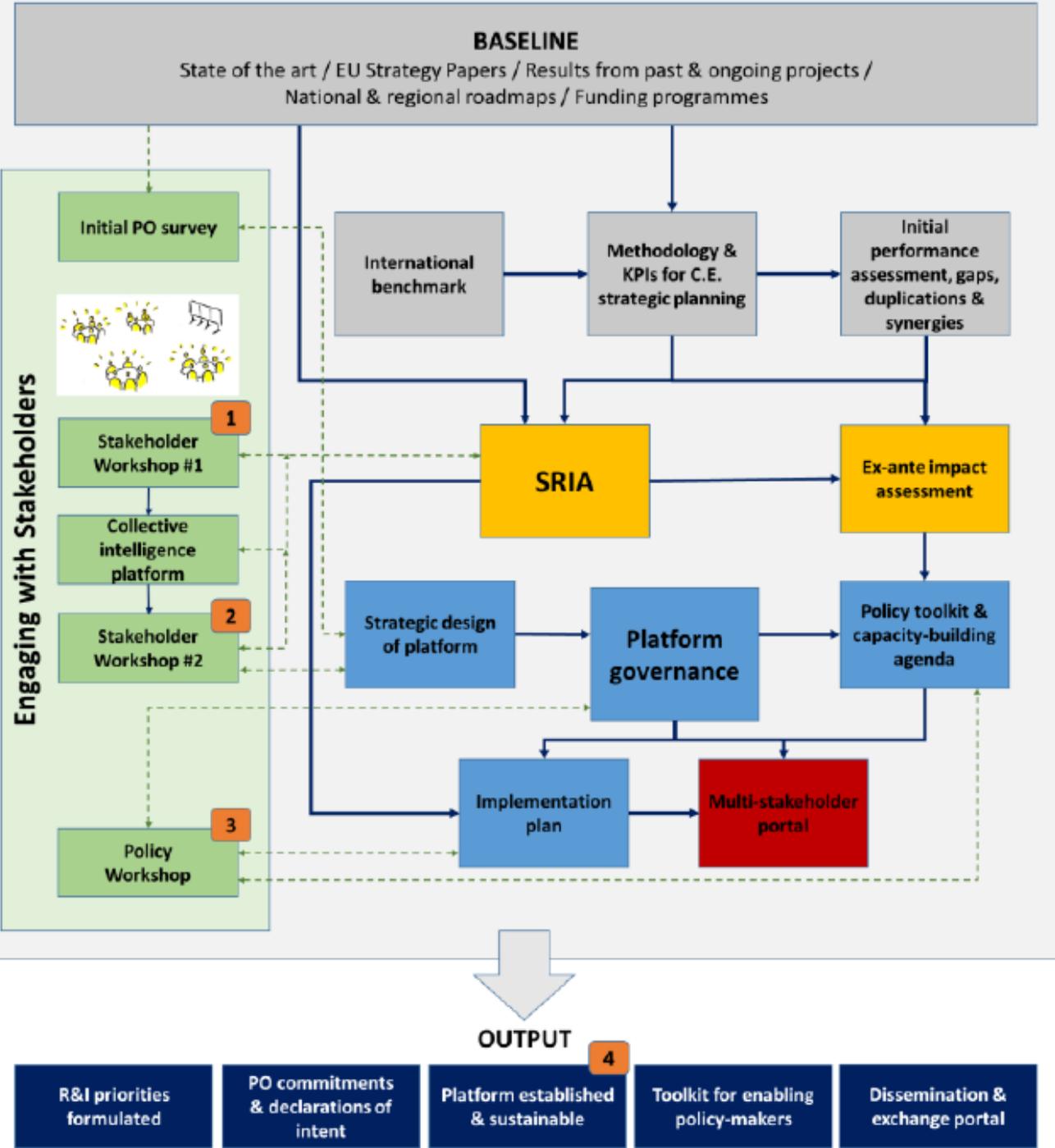
Geographical coverage



CICERONE approach

- the establishment of a **platform** which will determine the **priorities and pathways** for coordinated R&I for CE.
- influence the priorities in future European, national and regional CE programmes. This will lead to more synergy, sharing of results, and return on public investments in research and innovation.
- **CICERONE's goals are to align as much as possible pan-European, national and regional research and innovation in order to speed up the transition to a European circular economy.**

CICERONE methodological framework



Implementation pathways

BENCHMARK

- build an understanding for circular economy within the European context, through an **analysis of the state of the art** and a benchmark against other world regions.
- overview the **definition and concept** of the circular economy from European perspective
- report on **current state of the art & understanding** of the circular economy
- Design a **framework for a circular economy strategic planning**

RESEARCH and INNOVATION

- define a European circular economy SRIA that responds to the joint policy priorities and needs of policy makers and market players.
- Guidance on methodology to update the agenda
- Impact assessment

Implementation pathways

TASKS

- Define the **strategic role** of a European CE R&I joint programming platform, taking into account the **expectations** of all relevant **stakeholder types** (in particular SMEs) – **stakeholders will have a role in the future platform governance**
- Design an institutional **capacity-building strategy**
- Define an organization to **maintain and ensure the sustainability** of the platform post-project
- Design a **pilot joint implementation** plan/programme and identify preliminary lessons learned

CE programmes benchmark

- CICERONE assessed 104 Research & Innovation projects/programmes to provide an overview of the current R&I priorities in European countries and regions.

Findings:

- ✓ R&I for circular economy in Europe mostly consists of **national programmes**, lasting on average 1 to 3 years.
- ✓ The focus is predominantly on **waste or biomass**, and the most frequently addressed product life cycle phase is the **end of-life phase**.

CE programmes benchmark

- ✓ Most funding goes towards **technology and process optimisation**, and the most frequent beneficiary sectors are the **manufacturing and water sectors**.
- ✓ With regard to Technology Readiness Levels (TRL), programmes are mostly **field pilots** or referred to **market introduction**.
- ✓ There is a deficit with regard to **long-term up-scaling projects** that would bridge the gap between successful research and actual implementation on an industrial level.
- ✓ This challenge requires the necessity of **interdisciplinary cooperation** of actors from **different sectors alongside the value chain**; this is often related to high uncertainties and economic risks, as well as business opportunities.

CE programmes benchmark

Looking at the objectives and key performance indicators, the results did not really provide **a consistent strategic idea of a European circular economy approach.**

- ✓ different member states and regions seem to follow different, and sometimes even contradictory strategies – thus, the outcomes suggest that there is the need for a more consistent **European R&I strategy on circular economy.**

CE programmes benchmark

- ✓ in a context of **legislation** and the development of technology and business fields - we notice that the situation in Europe is still very **fragmented** and **context-dependent**.
- ✓ A large momentum of **aligned instruments** cannot yet be observed, although most countries are now working very intensively on the development of CE instruments and strategies. The implementation status is very diverging.

**fields of education, training and social behaviour,
are not very high on the agenda of circular economy
funding - **social & behavioural innovation** need to be
supported too**

WRF hosted 1st CICERONE Workshop



CICERONE is developing common priorities for the circular economy across the EU, so that POs and funders know where to invest to optimise impact.

Pointers for the SRIA

POs:

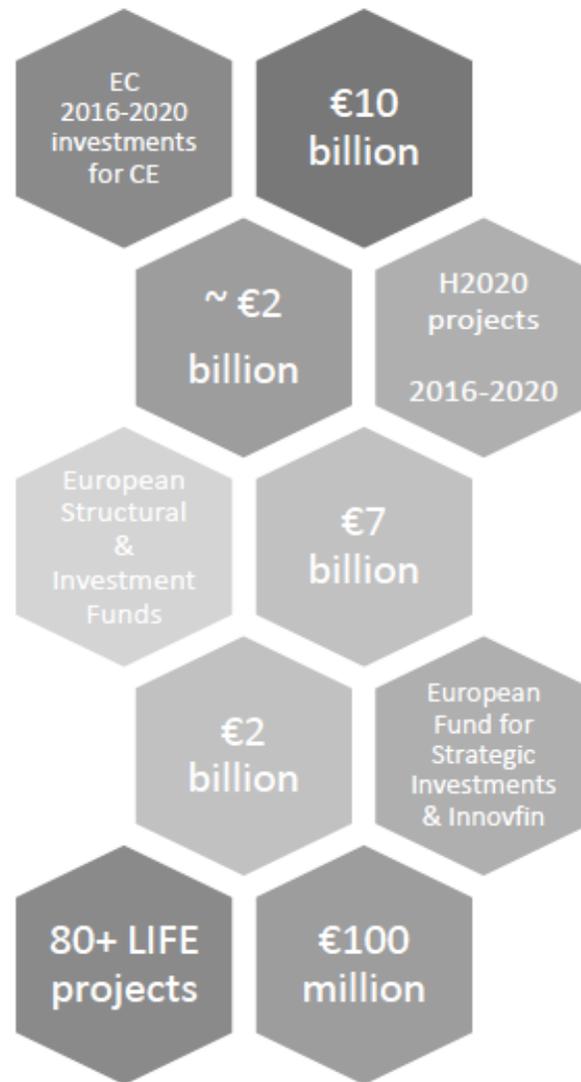
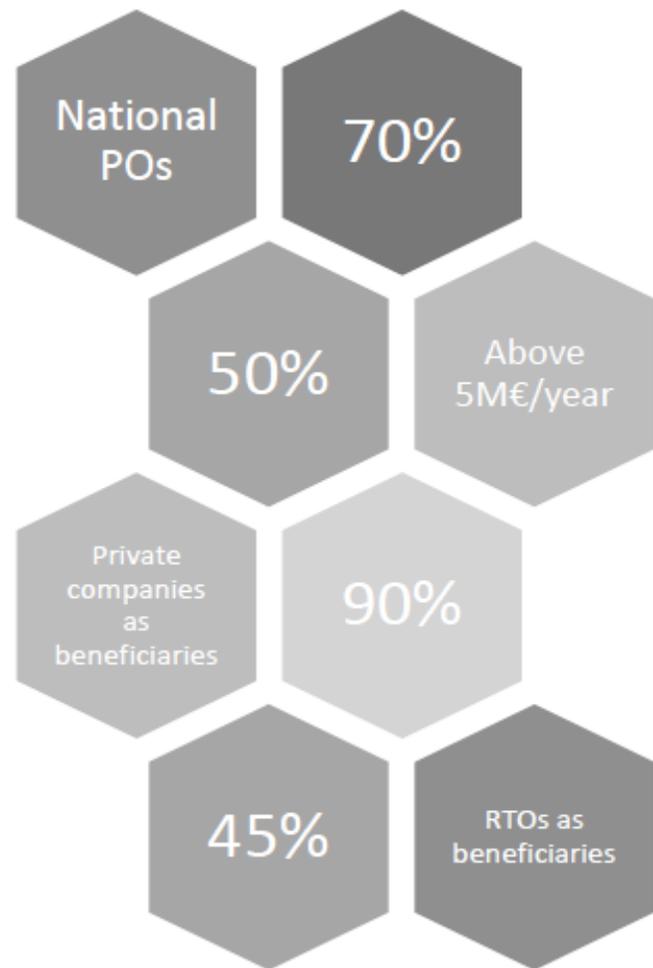
- ✓ a need for new resource-efficient policies, increased collaboration between actors
- ✓ more attention for a resource **efficient society and education**
- ✓ a need for a common **strategic European vision** on the road to a circular economy transition - as a basis for research demands - as well as the design of **evidence-based tactical interventions.**

Pointers for the SRIA

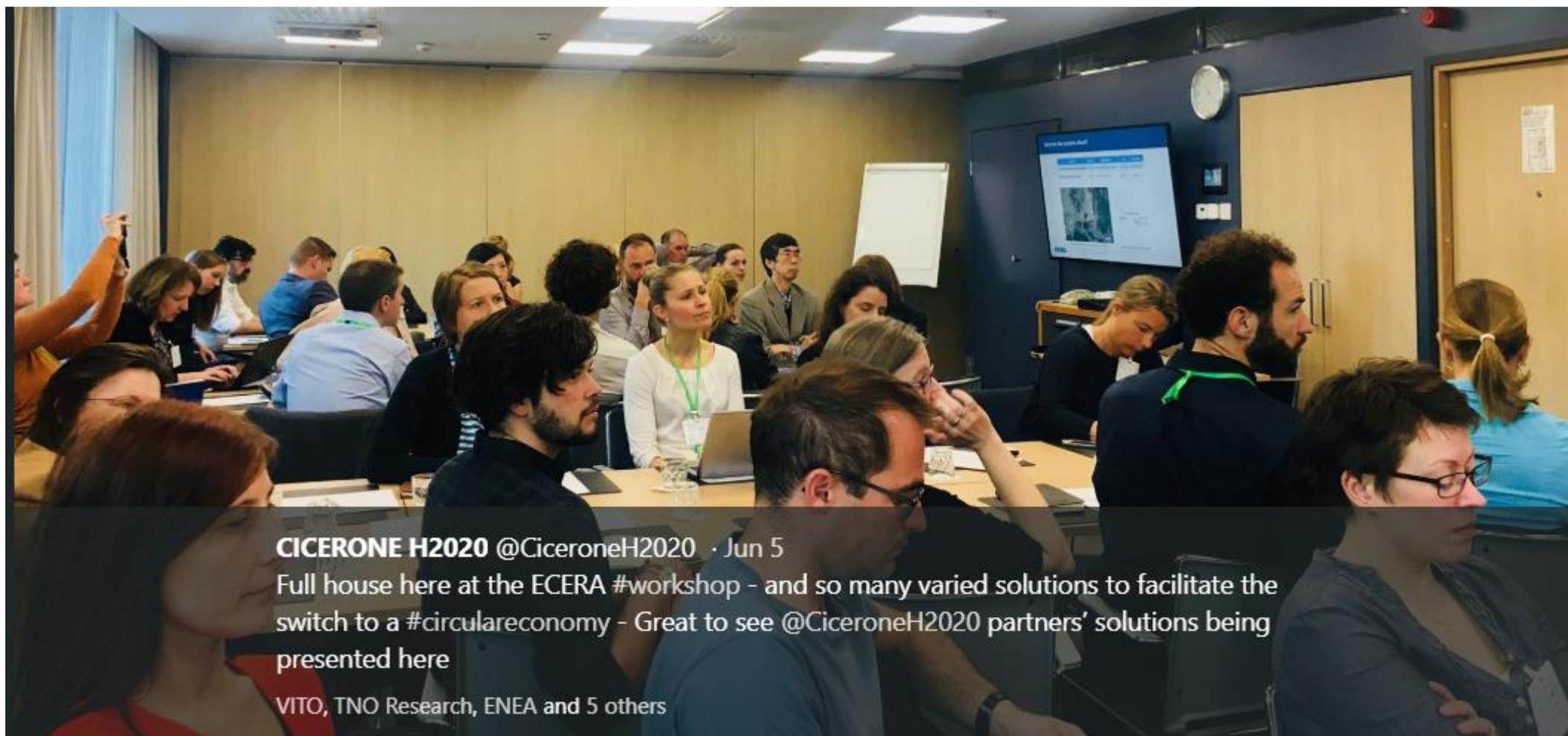
POs:

- ✓ a need for extra attention towards **non-technical knowledge**, such as how to create a resource efficient society, influence behaviour and establish structural cooperation between actors.
- ✓ Other needs:
 - ✓ Monitoring mechanisms and joint vocabulary / definitions
 - ✓ Standards for recycled materials, and recycling technologies
 - ✓ Focus on plastics
 - ✓ Intelligent energy and material saving construction
 - ✓ Food, especially in the context of bio-products and waste minimisation.

Key figures on the current situation: circular economy programs & projects



Way Forward and how you can join



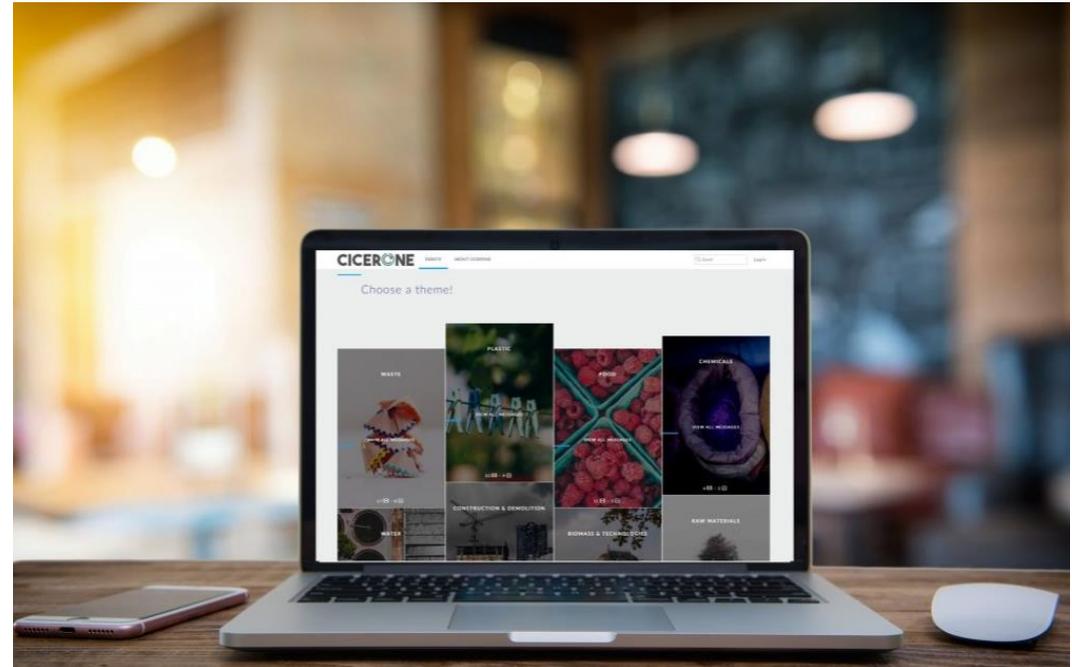
CICERONE H2020 @CiceroneH2020 · Jun 5

Full house here at the ECERA #workshop - and so many varied solutions to facilitate the switch to a #circulareconomy - Great to see @CiceroneH2020 partners' solutions being presented here

VITO, TNO Research, ENEA and 5 others

Online Debate

- Would you like to have your say in defining key innovation priorities for the circular economy and propose and challenge Research & Innovation fields for the European Circular Economy R&I Agenda?
- [CICERONE](#) has launched an online consultation to align circular economy European, national, regional and local policy and funding, and understand various priorities across the European territory.
- The results will contribute to shaping the **European Circular Economy Strategic Agenda for Research and Innovation**.
- Join now: <http://bit.ly/ciceroneconsultation>



Conclusions

- 100 % circular: - no waste, no virgin materials, circular design, circular use, renewable energy
- end-of-life is not a focus of CE
- ADIDAS example – „Postpone linear approach“ – putting a second cycle to materials
- Real change makers are businesses
- Not about profitability as such but cash flows this is based on markets Question: how to create markets for circular economy goods – when the e.g. incentive is phased out to create a stable and growing market



Get in touch for more information



All public reports produced in the project will be available for download on the CICERONE website



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