

CIRCULÉIRE Thematic Working Groups 2021 – Call for Panel Members / Associate Members

CIRCULÉIRE is seeking expressions of interest from suitably qualified and experienced individuals or organisations to become Panel Members / Associate Members for its three industry-oriented Thematic Working Groups (TWGs) in the 2021 period on the following topics:

- Circular Design & Redesign
- Circular Packaging & Reusables
- Circular Plastics

About CIRCULÉIRE's Thematic Working Groups

CIRCULÉIRE is the first cross-sectoral industry-led innovation network dedicated to accelerating the net-zero carbon circular economy in Ireland. CIRCULÉIRE is a €4.5m public-private partnership co-created by Irish Manufacturing Research (Secretariat), and three Strategic Partners; the Department of the Environment, Climate and Communications (DECC), the Environmental Protection Agency (EPA), and EIT Climate-KIC and 25 Founding Industry Members.

CIRCULÉIRE's overarching objective between 2020-2022 is to source, test, finance, and scale, circular manufacturing systems, supply chains and circular business models to deliver significant reductions in both CO₂ emissions and waste across our Industry Membership over the programmes' lifespan.

Kicking off in Q2, 2021, the three Thematic Working Groups (TWGs) will run until September (Q3-4), 2021 for a period of approximately 12- 16 weeks.¹ The three TWGs will run concurrently with a staggered start date of April, May & June (with all activities concluding by September).

The Thematic Working Groups, which will be co-delivered by IMR with support by Expert Facilitators, support this strategic objective by providing CIRCULÉIRE's industry partners with:

1. Expert knowledge, guidance, and support to ensure members are familiar with strategically important topics related to the Circular Economy and its implications for industry.
2. Thought leadership and high-quality content aimed at informing the ideation process – and supporting industry's transition towards circularity (e.g. a State-of-the-Art Review (SoAR) i.e. a landscape review of relevant national and EU policy, industry best practice, key barriers and key enablers to scaling circular economy strategy or practice in Ireland)
3. Ideation sessions to help industry members prepare and pitch innovation 5-10 project ideas which can be funded through CIRCULÉIRE's ring-fenced network innovation fund dedicated to funding large scale systems-level innovation;

About the Panel Member / Associate Member role

The Panel Members play a key role in ensuring that the CIRCULÉIRE's Thematic Working Groups integrate the perspectives and expertise of a good cross-section of Ireland's innovation ecosystem (including academia, government, third sector, solution providers etc.). We anticipate this being a 3-day commitment in total (approximately 1 day / month) per Thematic Working Groups over the period they are being run. The main tasks the Panel Member will be responsible for is to undertake

¹ A more detailed timeline will be agreed with the consultant as service contracts are being drawn up.

scoping, peer review of the State-of-the-Art Review undertaken by IMR/Expert Facilitator, and attendance at circa 8 x 90-minute virtual meetings, workshops and webinars led by IMR over a 12 - 16-week period:

- **Meeting 1:** TWG Kick-Off Meeting to agree on scope & framing of State-of-the-Art-Review (SoAR)
- **Meeting 2:** Panel Meeting to Discuss Peer Review Feedback on SoAR
- **Ideation Workshops:** Attendance at, and contributing to 2-3 TWG Ideation/Sprint workshops (spread over 1 week) which aim to generate 5-10 circular system innovation project ideas tailored to the Irish context
- **Meeting 3:** Panel Meeting to Discuss Peer Review Feedback on Synthesis Paper (a short report which will summarise the policy context and the opportunities for innovation projects identified through the Ideation/Sprint workshops)
- **Webinars:** Invitation to join 2x webinars for CIRCULÉIRE Founding Members and public audience, where the overall findings of the TWGs will be presented

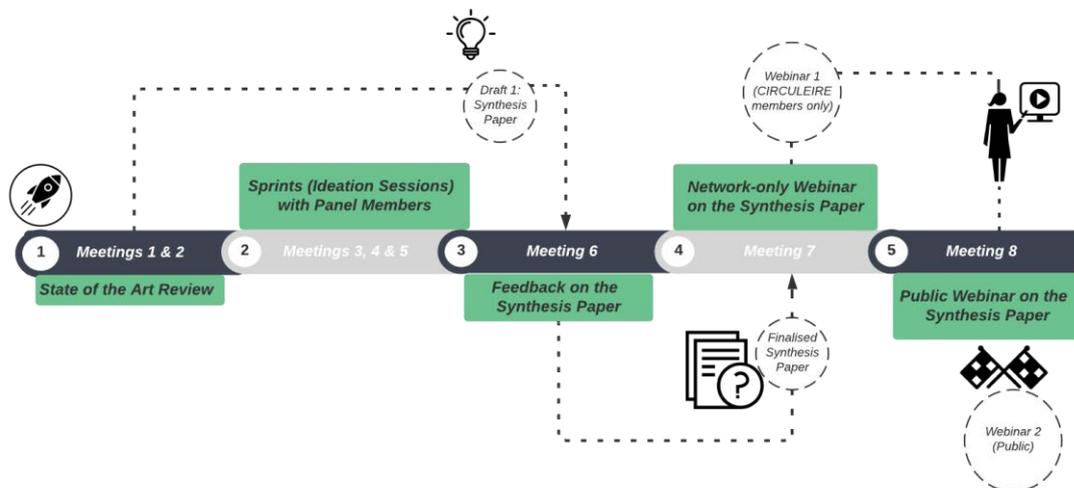


Figure 1: Diagrammatic representation of the Thematic Working Group's overall approach

Background of the TWG topics

High-level overview of the thematic areas for the 2021 Working Groups

<p>#1</p>	<p>Circular Design & Redesign</p> <p>Circular Design is a stated priority under key national and European policies such as new Waste Action Plan for a Circular Economy (WAPCE) and EU Circular Economy Action Plan (EU CEAP 2.0). Circular Design refers to "improvements in materials selection and product design standardisation / modularisation of components, purer materials flows, and design for easier disassembly), [and lies] at the heart of a circular economy" (EMF, 2012:9) Key to developing sustainable products, services and value chains, Circular Design involves looking at design issues such as design for repair and recycling, including availability of spare parts, and removing barriers to reuse and repair, so that current products and services can be redesigned with circularity at their core.</p> <p>Moreover, Circular Design plays an important role in enabling producers to design out waste and pollution - and features prominently in the Extended Producer Responsibility (EPR) measures contained in the Government's new WAPCE, which recognises the importance of eco- and smart design and:</p>
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- Provides an incentive to producers to design products that contribute to waste prevention and facilitate recycling by taking into account their durability, reparability, reusability, recyclability and the presence of hazardous substances.
- Acknowledges EPR schemes need to develop strategic plans for their respective waste streams which will foster greater engagement along the supply chain with a particular focus on the design and manufacturing sectors.

Thematic Working Group Objectives

State of the Art Review of Irish and European policy/strategies and corresponding legislative framework (including, but are not limited to: [EcoDesign](#) legislation, frameworks and [Circular Design Guides](#) and new Irish [Waste Action Plan for a Circular Economy](#)). This Thematic Working group could explore how circular design principles can help industry maintain their competitive advantage and while becoming better aligned with current Government priorities and needs, such as a focus for shortening industrial value chains (in the face of supply and demand-side disruption with Brexit, COVID, etc.) and securing investment/jobs in Ireland. This Thematic Working Group should look to map and review international best practices regarding Circular Design and with input from industry and panel members, it should assess opportunities and practical requirements for innovation projects related to this topic.

Example(s) of Systems Innovation Project Ideas could include:

- Product and/or service redesign with pilot testing of a circular manufacturing design matrix in multiple sectors.
- Pilot testing of circular service redesign e.g. closed-loop production systems in different industries such as ‘pay-per-use’ or ‘product as service’ models.

#2

Circular Packaging and Re-Usable (includes Re-Fillable Packaging Systems - B2C and B2B)

Packaging is a key priority of the EU Circular Economy Action Plan and the Irish [Waste Action Plan for a Circular Economy](#), which identifies packaging as one of the waste streams where the Extended Producer Responsibility model is to be used. In 2018, packaging waste generated in the EU was estimated at 174 kg per inhabitant (varying from 67.8 kg per inhabitant in Croatia and 227.5 kg per inhabitant in Germany) ([Eurostat, 2020](#)). From 2008 to 2018, paper and cardboard was the main packaging waste material in the EU (31.8 million tonnes in 2018) followed by plastic and glass (14.8 million tonnes for plastic and 14.5 million tonnes for glass waste materials in 2018) ([ibid.](#))

As of February 2021, the European Commission is undertaking a review of the essential requirements of the [Packaging and Packaging Waste Directive \(1994/62/EC; PPWD\)](#) with a view to reducing (over)packaging and packaging waste, and driving design for reuse and recyclability of packaging - particularly where alternative reusable products or systems are possible or consumer goods can be handled safely without packaging. By the end of 2024, it is expected that all EU countries will have producer responsibility schemes established for all packaging. This Thematic Working Group will seek to prepare industry for these changes, exploring opportunities for innovation where industry can reduce or replace their primary, secondary and tertiary packaging waste with more re-usable, re-fillable or recyclable packaging systems.

Thematic Working Group Objectives

State of the Art review of key policies and legislative frameworks at national and European levels, highlighting their implications to industry partners. Moreover, this Thematic Working Group should look to map and review international best practices regarding circular packaging solutions (e.g. B2C and B2C re-usable packaging models which utilise digital technologies and track and trace to enable re-usable / refillable packaging models, inter-supply chain transportation, etc.). With input from industry, it should assess opportunities for innovation – and innovation projects - such as the development of substitutes for currently non-recycled and non-recyclable packaging (for example sectors with stringent health and safety requirements traditionally single-use packaging like food and pharmaceutical sectors) and highlight key considerations, such as

	<p>economic viability and infrastructure required to implement re-fillable, re-usable and/or recyclable packaging systems in a B2B vs. B2C context.</p> <p>Example(s) of Systems Innovation Project Ideas could include:</p> <ul style="list-style-type: none"> • Pilot of packaging substitutes for multi-layered forms of packaging (e.g. crisps packs, blisters packs) through packaging simplification or alternatives that improve recyclability. • Pilot testing of biodegradable and compostable packaging solutions e.g. bio-polymer formulations with a high content of renewable sources.
#3	<p>Circular Plastics</p> <p>The production and consumption of plastics today offer a series of benefits (in particular low production costs, durability and versatility) but it also pose several challenges (including loss of material value as a result of single use and low recycling rates, and negative effects on nature, marine life, climate and human health) (EP, 2017). Of the 30 million tonnes of end-of-life plastics collected in Europe each year, today just 5 million tonnes make it back into marketable products (POLITICO, 2020). The rest is either incinerated, landfilled or exported for recycling.</p> <p>To meet the ambitious European Green Deal objectives, much more plastic waste needs to be recycled and more sustainable, non-toxic alternatives found. The chemical industry has an important role to play in achieving the transition to circular plastics - by contributing to all forms of plastics recycling: mechanical, chemical and organic. Meanwhile, innovations in green chemistry are now making it increasingly possible for industry to substitute plastics derived from fossil resources with non-toxic, bio-based alternatives from renewable resources which can reduce emissions of greenhouse gases, produce plastics that are easier to recycle to the virgin polymer and, at the end of their useful life, biodegrade in the environment (Green Chemistry, 2020).</p> <p>Thematic Working Group Objectives</p> <p>State of the Art review of key policies and legislative frameworks at national and European levels (including the Irish Waste Action Plan for a Circular Economy and the EU European Strategy for Plastics in a Circular Economy), highlighting their implications for industry. Moreover, this Thematic Working Group should look to map and review international best practices regarding circular plastics. Finally, with input from industry and panel members, it should assess opportunities and practical requirements for innovation projects related to this topic.</p> <p>Example(s) of Systems Innovation Project Ideas could include:</p> <ul style="list-style-type: none"> • Implementation of a chemical recycling demonstration plant for plastics to valorise waste produced in Ireland into alternative sectors (e.g. automotive; textiles, construction). • Implementation of pilot to enhance sorting and increase the overall recyclability of plastic waste (excluding PET bottles which are recovered and recycled). • Implementation of a pilot aimed at transforming organic waste residues into biodegradable bioplastics that could be used for packaging and/or other applications.

Thematic Working Group Panel Member Expressions of Interest

IMR, on behalf of CIRCULÉIRE, invites expressions of interest for the 2021 Thematic Working Groups up until midnight Thursday, 15th April, 2021.

Please submit your expressions of interest [here](#).

IMR Contact Person: Sophie Reynolds, Technologist – Circular Economy
E: sophie.reynolds@imr.ie