HORIZON –CL4-2022-TWIN-TRANSITION-01-06
HORIZON Innovation Actions
Grant Agreement No.: 101092295

Circular and Dynamic Manufacturing Supply Chain Orchestration and OptimiSation

CIRCULOOS Open Call #3.2: Value-Chain Extension & Enhance

Guidelines for Applicants

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement nº 101092295. This document reflects only the author's view, and the European Commission is not responsible for any use that may be made of the information it contains.

Contents

Abbreviations:

Abbreviation	Full Term
BMPN	Business Process Model and Notation
CM	Circular Manufacturing
CLT	Cross-Laminated Timber
DIHs	Digital Innovation Hubs
eDIHs	enhanced Digital Innovation Hubs
EC	European Commission
EXDs	Experiments for Demonstration
FSTP	Financial Support to Third Parties
GDPR	General Data Protection Regulation
GHG	Greenhouse Gas
ICT	Information and Communication Technology
IoT	Internet of Things
LCA	Life Cycle Assessment
MS	Member States
MSMEs	Manufacturing SMEs (Small and Medium-sized Enterprises)
OCT	Overseas Countries and Territories
OC2	Open Call 2
OC3.1	Open Call 3.1
OLAF	European Anti-Fraud Office
RAMP	RAMP platform
SCOPT	Supply Chain Optimization Tool
SCDT	Supply Chain Digital Twin
SGA	Sub-Grant Agreement

SMEs	Small and Medium-sized Enterprises

1 What is the CIRCULOOS - OC3.2 Offer?

When? *Timeframe*	From 8th of April 2026 to 10th of June 2026
Who? *Target entities*	Single entities that are: • **Manufacturing MSMEs:** Producers, recyclers, material processors wishing to join an existing chain. • **System Integrators & Tech Providers:** SMEs providing specific automation, sorting, or data solutions.
How? *Application pages*	• F6S Link: https://www.f6s.com/circuloos-open-call-3.2
What? *Supporting activities*	• **Objective:** To enhance existing CIRCULOOS Pilots & OC2 Demonstrators by adding "missing link" partners (supply, market, or technical). • **Funding:** Fixed Lump Sum of **€60,000** per entity. • **Duration:** 6 months

Informational Activities	• **Webinar 1**
	  ○ Date: **April 22**, 2026 (10:00 AM CET)
	  ○ Topic: "How to join a CIRCULOOS Value Chain: The Demand Menu & Missing Links"
	  ○ Covers: Guidelines, Open Call Mechanics, Platform Tools, Business & Financial Rules
	• **Webinar 2 (OC2/Pilots Session)**
	  ○ Date: May **20**, 2026 (10:00 AM CET)
	  ○ Topic: "Meet the OC#2 Winners & Pilot Leads"
	  ○ Covers: deep dive into specific Track A and Track B needs, Q&A with current consortia

2 What is the CIRCULOOS Project?

CIRCULOOS helps micro, small and medium-sized production companies redefine their supply chains through Circular Economy.

Understanding a single product as a resource, which undergoes multiple transformations throughout its lifetime (i.e. change), manufacturing SMEs can be seen as 'service providers' which act to transform this product. From this viewpoint, the orchestration of any number of manufacturers is a parallel example from the ICT world. The micro-services architecture model was developed to enforce an efficient management scheme over an ecosystem of services. Through well-defined service models and interfaces very efficient orchestrators can be put in place to deliver seamless interactions, while maintaining the integrity of individual services. Taking this parallelism back to the manufacturing world, CIRCULOOS develops:

- the means for all actors with a part in each phase of reuse, repair and remanufacture to describe their service models in usable data models.
- the orchestrator mechanisms to aggregate and execute services in this multi-actor ecosystem.
- the optimization logic for efficient collaboration
- the systematic and dynamic assessment of circular and sustainable profiles of products produced.
- the Marketplace, which acts as a hub for the subscription of new actors to this multi-service ecosystem and as a sustainability enabler.
- cybersecure framework for trustworthy data sharing among the supply chain actors, by extending the existing Circuloos platform.
- key AI and robotic functionalities to support the transition to disruptive circular products and/or services.

2.1 CIRCULOOS vision & challenges

Environmental and sustainability challenge

Reports indicate that doubling the circularity rate of 8.6% will cut 39% of emissions, and 28% of virgin resource usage. The manufacturing industry, which heavily relies on materials like steel, aluminum, and plastic, sees these as 30-45% of total costs. From 1995 to 2015, the share of global emissions from production materials increased from 15% to 23%. Raw material production contributes to 19% of global greenhouse gas (GHG) emissions, with waste management adding another 3%.

To achieve a reduction of 80-95% in global GHG emissions from 1990 levels by 2050, strategies must go beyond just low carbon energy and efficiency. They should include improved resource efficiency, recycling, repair, refurbishment, reuse, and overall reduction in raw material consumption, aligning with a circular economy approach.

The R-strategies (Repair, Reuse, Recycle, Refurbish, Remanufacture, Repurpose) aim to extend product lifespans and minimize waste. The CIRCULOOS project focuses on these strategies, especially those that necessitate re-engineering of production processes and are challenging for small and medium-sized enterprises (SMEs) to implement. CIRCULOOS aims to facilitate collaboration among various actors through its data management and AI tools on the RAMP platform, which helps in mapping organizational cooperation for a circular economy.

RAMP enhances factory flexibility, reduces resource usage, and allows for equipment reconfiguration (like robots and assembly lines) while maintaining quality, working conditions, delivery, and time constraints.

Market opportunity and growth challenge

"Circular economy presents a unique market opportunity upwards of $4.5 Trillion, by 2030. Waste is designed out, and products are instead looped back into the production system at end of use. Growth is decoupled from scarce resources and materials are kept within productive use as soon as possible"[1]and "is attributed to greater circulation of materials, limited waste volumes directed to landfills, driven by accelerating digitisation, increased efficiency and cost optimisation"[2]. However, growth can be achieved only if valuable resources do not exit the supply chain as waste and only if the resources required for production are made available on time. This link reveals the connection between growth and efficient communication between the actors.

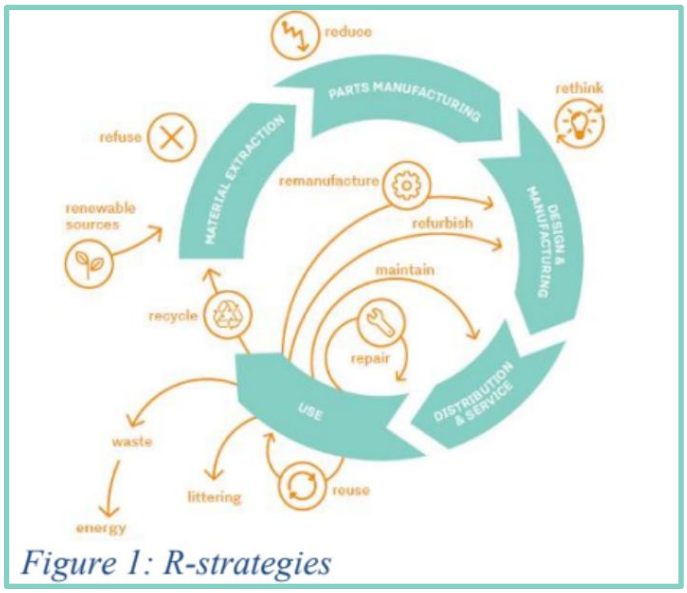

Figure 1: R-strategies

Cybersecurity challenge

The manufacturing sector is the second-most attacked industry[3], yet the sector lags behind when it comes to security. Smart factories are exposed to the same vulnerabilities and attack methods/vectors, similar to what other networks face and as more and more devices are connected to the internet, factories are exposed to more Cyber Risks. Industry 4.0 organisations face new challenges, including: expanded attack surface, cybercriminals interest in industrial enterprise, underestimation of general threat levels lack of understanding of specific threats that result in suboptimal selection of controls. Such challenges cannot be addressed solely by technical approaches and solutions, focus should be placed on the people, process, and technology components of these challenges.

Necessary data sharing practices are not enabled, nor spread

The value and culture of data sharing is not fully spread and captured along the manufacturing supply chains and there is still limited evidence on how data sharing can drive circular value and contribute to the shift to circular economy[4]. Overall, MSMEs do not fully understand the benefits of sharing data, and still need to cope with two challenging scenarios. First, the interfaces and data models in manufacturing supply chains are not standardised across data sharing ecosystems and there is no common solution compatible

[1]https://theprint.in/opinion/a-circular-economy-isnt-just-planet-friendly-its-a-trillion-dollar-market-opportunity/604408/

[2]https://www.globenewswire.com/news-release/2021/10/27/2321903/28124/en/Global-Waste-Recycling-and-Circular-Economy-Market-Report-2021-Revenue-was-457-14-Billion-in-2020-is-Expected-to-Expand-to-517-26-Billion-in-2021-at-a-Growth-Rate-of-13-3.html

[3] https://www.techradar.com/news/industry-40-suffering-major-security-issues

[4] "Data sharing for circular economy in the Nordics", Nordic innovation, September 2021.

for all the actors. Second, cybersecurity features and data governance agreements are often developed on a case-by-case basis, the level of standardisation is also quite limited in this regard. Thus, the role of open standards and shared best practices is a cornerstone to help MSMEs address actual data sharing challenges regardless of their digitisation state.

Skills challenge - Towards CM and Industry 5.0

By 2025, 50% of all employees will need reskilling and 53 million jobs across the EU will be automated by 2030 (World Economic Forum's Future of Jobs Report[5]). 14% of manufacturing workers are at risk of unemployment (Brussevich, et al, 2020[6]), that is why upskilling towards CM is essential. Manufacturing is providing 32M jobs in 25 industrial sectors with over 2 million companies, and access to digital skills is one of the three top constraining factors for enabling digitalization, I4MS-4TS (2022)[7] indicated that one of their main barriers was the lack of skilled employees required to adopt advanced manufacturing technologies. MSMEs need training measures and facilitate upskilling strategies to guarantee the future implementation of Circular Manufacturing adopting Industry 5.0 by SMEs where possible, upskilling them to adapt their knowledge to the new technology requirements, as teaching 'future resilient' skills can help workers adapt to automation. Reaching their targets, MSMEs require upskilling structured in a way to respond to the context manufacturing SMEs are embedded in.

2.2 How CIRCULOOS will solve the challenges

In the face of these challenges CIRCULOOS aims to deliver the tools to enable MSMEs to become full members of the Circular Manufacturing value chain. These tools orchestrate and continuously optimise the supply-chain end-to-end and integrate planning and execution monitoring to enable transparent and on-time communication. Combining these with direct calculation of the product sustainability and circularity profile, for both internal and external partners, this environment will enable them to configure and execute disruptive circular manufacturing processes for **sustainable productio**n that covers the entire **life cycle of products; either by recovering the value of product that ended-up as waste or from recycled and remanufactured products.**

To achieve this objective the project aims to deploy:

- Circular end-to-end supply chain orchestration for collaborative workflows which incorporates planning and execution metrics and integrates advanced and multimodal visualisation and analytics. The visualisation is delivered by comprehensive Digital Twins of the supply chains formulated, the factory processes and product design phases.
- Supply Chain Optimisation that monitors the global (across the supply chain) and local (within the factory) processes and execution, inputs and outputs and configuration parameters, to enable data-driven AI decision making, this way supporting continuous optimisation of targeted and measured performance and sustainability parameters.

[5] https://www3.weforum.org/docs/WEF_Future_of_Jobs_2020.pdf

[6] https://www.imf.org/en/Publications/WP/Issues/2020/06/12/Who-will-Bear-the-Brunt-of-Lockdown-Policies-Evidence-from-Tele-workability-Measures-Across-49479

[7] https://i4ms.eu/working-group-on-digital-skills-upskilling-and-reskilling-in-the-manufacturing-sector/?utm_source=rss&utm_medium=rss&utm_campaign=working-group-on-digital-skills-upskilling-and-reskilling-in-the-manufacturing-sector

- Dynamic Sustainability Assessment functionalities that investigate alternative supply-chain scenarios (varying in terms of materials used, processing technologies, suppliers involved and/or activated circular economy practices) in place of the existing schemes, quickly measuring their performance in terms of environmental sustainability and circular economy profile.
- Supply Chain Data Sovereignty platform for seamless, multi-level data flow across the supply chain partners, supporting the reuse of materials in novel products, the extension of the life-cycle of finished products (remanufacturing), and data-driven decisions for collaboration of parties offering matching services in the most dynamic and efficient way.
- Cybersecure and trustworthy data sharing across the supply chain by employing a distributed, trusted and efficient Identity and Access management system, that together with the associated trust framework will coordinate the identities of all IoT objects and ensure trustworthy
- Automatic recognition of recyclable parts by modern Machine Vision tools and Advanced Robotics, to enable optimised flows in the selection process.
- Novel circular business processes will be demonstrated supporting reusing, reducing, and recycling material in production and consumption systems. The new collaborative production models will provide quantifiable results on the sustainability increase across the supply chain, in terms of efficient use of raw materials, of by-products, of waste and energy and of emissions reduction.
- CIRCULOOS leverages the above with the RAMP integrated innovation IOT platform and the European network around it to deliver a CM ecosystem and platform for Manufacturing SMEs.
- Skills upskilling and reskilling will be provided in RAMP and through online courses, webinars, and best practice guides and success stories based on the pilots and Experiments for Demonstration (EXDs).

2.3 Novel concepts for business that work upwards on the circular pyramid

The aim is to propose novel value chains and innovative product development that are aligned with waste hierarchy pyramid to reduce waste and its negative environmental impact, particularly on climate change. The waste hierarchy prioritizes waste management options, which from bottom to top move from more linear to more circular practices and thus expected LCA indicators improvements. Also moving in the opposite direction, there is trend to keep the product and extend its life at the end, or moving down to smaller pieces of products till the recovery of its raw materials. By promoting a circular model, where products are increasingly reused or repurposed, the need for new production is reduced, cutting down on resource consumption.

Figure 2 - Circular Pyramid representation

The principles outlined in the waste hierarchy can be generalized across various industries to create more sustainable systems. For example, in the manufacturing sector, companies can adopt lean production methods to reduce waste, reuse parts or products, recycle materials, recover energy from production by-products, and minimize landfill use.

By applying the waste hierarchy across different industries, businesses can contribute to a more sustainable and circular economy, focusing on reducing environmental impacts while optimizing the use of resources. This framework encourages industries to rethink waste not as something to be discarded, but as an opportunity to recover, repurpose, and reuse materials in innovative ways.

Here's an example of how the waste hierarchy applies to textiles[8]:

- Reuse: Extending the life of products by using them again for their original purpose or finding new applications. Swapping, donating, reselling used clothing, renting textiles, repairing clothes, and repurposing damaged or returned items.
- Recycle: Processing waste materials into new products or materials. An idea here is to design products for closed-loop recycling, where materials are recycled back into the same product. Textiles that are no longer suitable for reuse can be recycled into new materials, such as fibers for creating new clothing or non-clothing products. Recycling helps to close the loop, reducing the need for virgin materials and lessening the environmental burden of producing textiles from scratch. Mechanical and chemical recycling processes support this transition.
- Energy Recovery: Converting waste into energy. When textiles cannot be reused or recycled, another option is energy recovery. This involves converting waste materials into energy through

[8] https://www.interface.com/US/en-US/sustainability/recycling.html

processes like incineration. Although this step is not as preferable as the others, it can be a more sustainable option than landfill disposal, as it recovers some value from the waste.

· Disposal: Safe and responsible disposal of waste that cannot be prevented, reduced, reused, recycled, or used for energy recovery.

3 Who can apply and How?

To accelerate the transition toward circular manufacturing, CIRCULOOS has successfully implemented funding rounds to establish a robust baseline of circular value chains. While **Open Call 2 (OC2)** focused on forming *new* circular consortia and **Open Call 3.1 (OC3.1)** initiated the extension of our core Pilot lines, **Open Call 3.2 (OC3.2)** represents the next critical phase: **enhance and extension.**

OC3.2 is a "Value-Chain Extension" call. It enables **single entities**, specifically Manufacturing SMEs and Technology Providers, to join these established ecosystems as strategic partners. The goal is to address specific **"missing links"** (technical bottlenecks, supply shortages, or market gaps) that are currently limiting the scale or efficiency of the funded value chains.

Selected entities will contribute by introducing specific solutions for existing consortia, such as advanced sorting technologies, new material recovery processes, or downstream market access for circular products.

Open Call 3.2 is structured into two complementary tracks:

- **Track A: OC2 Enhance:** Focused on adding new partners to the **15 Demonstrators** previously funded under Open Call 2, helping them resolve specific implementation gaps and reach operational scale.
- **Track B: Pilot Extensions:** Focused on further strengthening the three core **CIRCULOOS Pilots** (Wood, Leather, Plastic) by introducing new R-strategies or increasing the volume of recovered materials through new local partners. (In this OC3.2 priority will be given to funding a project related to the Wood Pilot of the Circuloos project as opposed to Leather or Plastic. This means that in cases where proposals achieve the same score, the project will select the one addressing the Wood Pilot. This is because OC3.1 already funded two projects for the Plastic pilot and one for the Leather).

Both tracks share the same goal: to **strengthen and complete** existing circular economy practices.

The sections below provide detailed descriptions of **Track A** and **Track B**, helping applicants determine which "missing link" their expertise is best suited to address.

3.1 Type of Applicants

3.1.1 Eligible Applicants (Single Entities Only):

Open Call 3.2 is strictly dedicated to **single entities** capable of immediate industrial implementation. Applicants must fall into one of the following categories:

- **Manufacturing European Mid-Caps, MSMEs, and Micro-SMEs** (as defined in EU law – EU recommendation 2003/361) with a commercial activity in the manufacturing industry as a producer, or a technology/service supplier for applications in the manufacturing industry.
- **Circular Economy Enablers:** Recycling & Processing Companies, Waste Collectors, Upcyclers, and Repairers that add new recovery solutions to the value chain.

- **Technology Providers & System Integrators:** Entities offering specific technical solutions such as AI, automation, robotics, sorting, or data management required to bridge a gap in the value chain. **Research Organizations (RTOs), Academic Institutes (Universities),** are eligible for funding in Open Call 3.2 provided they develop and deploy (integrate to the pilot) their technical solution.

- **Other types of activities/ entities are NOT eligible in this OC3.2**. This call focuses exclusively on industrial actors for enhancement.

3.1.2 Eligible Countries

Legal entities applying for financial support to third parties must be established in one of the following countries:

- Member States of the European Union (EU-27);
- Horizon Europe Associated Countries, as listed in the official Horizon Europe document "List of Participating Countries in Horizon Europe" (version 2.4 – 15.01.2023)[9]

3.1.3 Multiple Submissions

The CIRCULOOS - Open Call 3.2 will accept a maximum of 1 application per applicant per track (Track A and Track B). A single entity is permitted to apply to both Track A and Track B simultaneously.

To do so, applicants must submit two separate and distinct applications on the F6S platform, one for Track A and one for Track B.

However, if successful in both evaluations, the applicant will only be selected and granted funding for one of the proposals (either Track A or Track B). This policy is strictly enforced to avoid double funding[10]

In case an applicant submits more than 1 application to the same track, all of their applications for that track will be automatically disqualified (see Eligibility Conditions).

[9] Entities established in associated countries are eligible for funding only if the Horizon Europe association agreement with their respective country of establishment is applicable at the time of signature of the CIRCULOOS Grant Agreement (i.e., February 2023)

[10] Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council, Article 191: Principle of non-cumulative award and prohibition of double funding. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32018R1046

3.2 Open Call Challenges

3.2.1 Track A: OC2 Enhance (The "Missing Links")

Objective: Engage individual industry actors to enhance and complete the circular supply chains previously funded under Open Call #2, by integrating specific "missing links".

How it works: Single entities (Manufacturing SMEs or Technology Providers) will provide a specific solution to the already established OC#2 supply chains that:

- **Unlocks scale or efficiency** by resolving a defined bottleneck (e.g., providing a specific sorting technology, securing a missing waste stream, or opening a new downstream market)
- **Extends product life cycles** further than the original pilot could achieve alone, by adding new R-strategies or deepening existing ones.
- **Integrates into the existing CIRCULOOS digital ecosystem**, ensuring the new partner's material flows and data are tracked alongside the original consortium members.
- **Validates the added sustainability impact** through Life Cycle Assessment (LCA), proving that the addition of this new partner improves the overall circularity of the value chain.

These new partners will integrate into one of the **15 demonstrators** currently running under OC#2. Unlike the previous call which formed the chains, Track A focuses on **strengthening and expanding** them. **Experiments will document and showcase the "Value Add" of the new partner**, illustrating how a specific intervention (the "missing link") transforms the process into a robust circular model. This includes identifying the specific gap, integrating the new production or sorting technique, and implementing the connection between the new partner and the existing chain. Examples include adding a robotic sorter or a machine vision system to a manual recycling line, introducing a new manufacturing entity that contributes with material resources (as waste, byproducts or products at their end of life) to the existing supply chain.

Key Activities for Track A Experiments

The CIRCULOOS experiments resulting from **Open Call #3.2 - Track A** should (describe at the proposal level to be successful and demonstrate during the experiment):

- **Identify/Select and Resolve a "Missing Link":** Clearly define the specific gap in the existing OC#2 value chain (e.g., technical bottleneck, supply shortage, lack of market access) from the list of OC#2 projects below, and demonstrate how the applicant's inclusion resolves this issue to extend the product's life or enable a new R-strategy.
- **Present an Integration Scenario:** Show how the new entity will digitally connect with the existing consortium. Use the CIRCULOOS platform tools (RAMP and Data Platform) to map this new connection. Given that the existing consortium already has mapped processes, the applicant must present how their specific production process, input sources, and output products fit into the existing **Supply Chain;** in the cases where a new manufacturing entity is added to the supply chain, the applicants will be asked to integrate their production schedule (for this product) with the Circuloos tools to enable traceability of the resources made available to the actors of the Supply Chain by integrating with the Circuloos Data Platform

- **Re-engineer Processes for Integration:** Present the necessary modifications or new processes required to integrate with the existing chain (e.g., adapting material specifications to meet the recycler's needs). When necessary, extend, adapt, or develop technical tools to enable this integration.
- **Measure the "Delta" in LCA:** Use the LifeCycle Assessment tool (GRETA) to measure the *improvement* in sustainability indices brought by the new partner. The focus is on quantifying the added value (e.g., "inclusion of Partner X reduced transport emissions by 20%"); this will be done via simulation (optional but strongly recommended).

Overall Result: The experiment should result in an enhancement**, more efficient, or more enhanced circular value chain**. The new partner must adopt the relevant CIRCULOOS tools to ensure the entire chain, old and new members alike, operates on a unified digital backbone, creating reusable components for the RAMP platform.

Clarifications regarding the concept of "Missing Links":

- **Add Value, Don't Duplicate:** The proposed activity must add a capability that does not currently exist or is insufficient in the current OC#2 consortium.
- **Digital Cooperation:** The integration must foster data exchange between the new partner and the existing chain nodes.
- **Measurable Improvement:** The addition of the new partner must result in measurable improvements in sustainability or circularity indices (e.g., closing a leak in the material loop).
- **Commercial Viability:** The extension should make 'commercial sense' (e.g., a local partner reducing logistics costs compared to a distant one).

3.2.1.1 CIRCULOOS Open Call 2 Winners Demonstrators (2025)

Target Projects for Track A Applications

Following a rigorous evaluation process, 15 consortia were selected for funding under Open Call 2. These projects represent a diverse range of innovative circular value chains. These 15 demonstrators are now in the implementation phase and serve as the **target ecosystems for Track A of Open Call 3.2**. Each of these consortia has identified specific **"Missing Links"**, gaps in supply, technology, or market access—that prevent them from fully scaling up. Applicants are free to **choose one of the needs** identified by the project **OR suggest a solution to a problem that is not identified** in the table below (the 'needs' are indicative and should not be treated as restrictions). The **solution must address** though the **sector** and **material type** as identified in the table below.

Note#1: the supply chains listed below usually refer to entities with geographic proximity. This constraint does not apply to the applicants of OC3.2 (there is no requirement that the applicants are geographically close to the supply chain they intend to support /enter). This 'relaxation' is made to be more inclusive towards proposals that bring value to the existing supply chains.

Note#2: proposals should propose a **solution to an existing problem** of the referenced supply chains (the 'problem' should be understood as a barrier that does not allow the supply chains to fully develop). These solutions may address for example a technical problem, a decision making/ optimization problem, logistics

problem, etc. Simple procurement of raw materials or consumption of the end-products is **strongly discouraged** and should be avoided. In the cases where an *extension of the existing supply chain* is proposed, applicants should clearly define the additional (re)manufacturing/ recycling step they themselves introduce. For example, in the 'description of needs' column of Table 1, the term 'supply' should be understood as 'supply after pre-processing or recycling', the term 'validate' should be understood as 'introduction to our existing product line and use in …'

Note#3: applicants should not assume a pre-existing state or base their proposals on third party results. The proposals should present a solution that will be realized without the help or support of the Circuloos project or the OC2 experiments listed below – they should be realized autonomously. The Circuloos project will support the selected proposals in the technical activities related to the integration with the *Circuloos tools*. OC2 experiments (existing projects) may be invited to collaborate with the selected winners from OC3.2 on a case-by-case basis.

Table 1 OC2 Projects – Sector, Material, Need

ID	Project Acronym	Sector	Material / Feedstock	Type of Partner Needed	Short Description of Need (to be used as an example)	Project Summary
DEMAND-01	ISLOPOL	Packaging / Waste	Expanded Polystyrene (EPS)	♻ Supply	Waste management org for large-scale EPS plastic waste supply.	Creating a circular supply chain for Expanded Polystyrene (EPS) waste on the island of Madeira. Smart bins with AI computer vision classify waste, which is collected by the waste authority and remanufactured locally into insulation and packaging.
DEMAND-02	ISLOPOL	Packaging / Waste	Expanded Polystyrene (EPS)	End-User	Construction company to validate and use recycled EPS-enhanced lightweight concrete.	
DEMAND-03	RECONCRETE	Urban / Construction	EAF Steel Slag & C&D Waste	♻ Supply	Supplier of waste slag from EAF steelmaking and C&D waste.	Manufacturing 3D-printed urban furniture using waste slag from steelmaking and construction waste as cement substitutes. The project reduces CO2 emissions compared to traditional casting, leveraging CIRCULOOS tools for process analysis and LCA.

DEMAND-04	SHINE AGAIN	Furniture / Design	Metallized Polypropylene (PP)	♻ Supply	Manufacturing partner for CNC milling of recycled plastic misprints.	A closed-loop supply chain repurposing metallized polypropylene caps (industrial waste) into high-value 3D-printed furniture and trophies. The dual-cycle reuse model tracks material flows via CIRCULOOS tools, demonstrating micro-scale circular manufacturing between SMEs.
DEMAND-05	SHINE AGAIN	Furniture / Design	Metallized Polypropylene (PP)	🛠 Technology	Integrator for CNC milling and post-processing of recycled plastics.	
DEMAND-06	ECOFFEE	Food / Waste	Biowaste	End-User	Large animal feed company to incorporate coffee-derived products.	Transforming spent coffee grounds from HORECA/vending into animal feed ingredients and biocidal products. The project uses reverse logistics on existing coffee delivery routes to collect waste, processing it into high-value bio-based prototypes while using CIRCULOOS tools for LCA validation.
DEMAND-07	ECOFFEE	Food / Waste	Biowaste	🛠 Logistics	Logistics/processing partner to collect and dry spent coffee grounds.	
DEMAND-08	GRANULAR	Construction	Granite Sawing Sludge	N/A	N/A	Transforming granite sawing sludge into high-performance building bricks and furniture using 3D printing. The project connects the granite sector in Occitanie with advanced manufacturing to revalorize industrial by-products stored in ponds.
DEMAND-09	EVOP	Energy / Agri	Biomass	♻ Supply	Olive agro-industrial cooperative to supply biomass across multiple sites.	Creating a circular chain for olive pits (from oil mills) to be used as renewable

DEMAND-10	EVOP	Energy / Agri	Biomass	🛠 Technology	Digital integrator to forecast and monitor biomass availability data.	biomass fuel. Cooperatives collect and process the pits for onsite or local energy use, promoting energy autonomy in the agri-food sector.
DEMAND-11	LEAFCYCLE	Bio-based / Pet	Fallen Tree Leaves (Green Waste)	N/A	N/A	Transforming fallen urban tree leaves into biodegradable clumping cat litter. The project establishes a local circular supply chain involving municipal green waste collection and processing, leveraging CIRCULOOS tools for traceability and LCA to provide an eco-friendly alternative to mineral litter.
DEMAND-12	BIOCORNER	Construction	Bio-waste (Mussel Shells, Plant Fibers)	End-User	Building materials manufacturer to scale up and validate bio-based structural mortar.	Establishing a regional chain in Emilia-Romagna to transform agri-food residues and mussel shells into eco-sustainable construction mortars. The project reduces cement use and diverts bio-waste from landfills.
DEMAND-13	YEAST2VALUE	Food / Biotech	Brewer's Spent Yeast	End-User	Food processing company to integrate upcycled protein ingredients into recipes.	Upcycling brewer's spent yeast into high-value protein ingredients for food and biotech. The project uses an AI platform for value chain design and LCA to replace virgin protein sources with industrial by-products.

DEMAND-14	LOOP-E	Electronics / Mfg	Polymers & Metals from White Goods	♻ Supply	Recycled material supplier for polymers/metals from end-of-life white goods.	Implementing a circular demonstrator for washing machines using real-time Digital Product Passports (DPPs). Operational data from manufacturing and assembly is linked to enable lifecycle traceability, supporting refurbishment strategies and automated environmental impact scoring.
DEMAND-15	LOOP-E	Electronics / Mfg	Polymers & Metals from White Goods	♻ Supply	Refurbishment or reverse logistics SME to collect and process end-of-life washing machines.	
DEMAND-16	LOOP-E	Electronics / Mfg	Polymers & Metals from White Goods	🛠 Technology	System integrator for reverse data integration and AI-automated disassembly.	
DEMAND-17	RE-PLAY	Plastics / Toys	Post-Consumer Plastic (Toys)	♻ Supply	Regional post-consumer waste collector specialized in end-of-life toy recovery.	Developing a blockchain-based Digital Product Passport platform to track plastic toys from manufacturing through use to recycling. The project aims to facilitate repair and high-quality recycling, ensuring compliance with EU regulations.
DEMAND-18	RE-PLAY	Plastics / Toys	Post-Consumer Plastic (Toys)	🛠 Technology	Robotics/AI provider for automated plastic identification and sorting.	
DEMAND-19	REQ	ICT / E-waste	E-waste (Laptops, Desktops)	♻ Supply	Technology retailer or distributor to systematically supply end-of-life or traded-in computers.	A decentralized supply chain for refurbishing laptops and desktops. Devices are collected, technically refurbished, and redistributed to vulnerable groups (refugees, low-income), bridging the digital divide while reducing e-waste.
DEMAND-20	SEARCLE	Adv. Materials	Mineral Waste (Seashells, Ceramics)	♻ Supply	Aggregator/supplier of mineral-rich waste (seashells, ceramic by-products) for powder production.	Producing recyclable ceramic powders for 3D printing from seashell waste and recycled glass. These

DEMAND-21	SEARCLE	Adv. Materials	Mineral Waste (Seashells, Ceramics)	Validation	Industrial composite manufacturers (aerospace/auto) to test and validate soluble ceramic mandrels.	powders are used to print sacrificial tooling for aerospace/automotive composites, demonstrating a regenerative closed-loop process.
DEMAND-22	SEARCLE	Adv. Materials	Mineral Waste (Seashells, Ceramics)	Technology	Process integration partner to automate powder recovery, reconditioning, and digital traceability.	
DEMAND-23	PLASMIX ROAD	Construction	LDPE Plastic Rejects	Technology	Tech provider for digital traceability of recycled materials.	Revalorizing LDPE rejects from plastic recycling processes, currently landfilled or incinerated. This waste is treated to create a novel additive for asphalt mixtures, reducing reliance on virgin bitumen. The project creates a digitally traceable value chain for sustainable roads validated via CIRCULOOS tools.
DEMAND-24	ReCLAIM	Metalworking	Machine Tools & Components	Supply	Industrial machine tool recovery operator to source, disassemble, and pre-sort end-of-life equipment.	Extending the lifecycle of industrial machine tools via an AI decision-support platform that predicts component life and recommends Reuse/Remanufacture strategies. The project connects users, upcyclers, and tech providers to create a secondary market for industrial components.

3.2.2 Track B: Pilot Extensions

Objective: Strengthen CIRCULOOS pilot value chains by **integrating new circular economy solutions** into existing projects.

How It Works:

Participants will collaborate with pilot stakeholders to:

- **Introduce new R-strategies** – Expanding recovery and reuse options within pilot industries
- **Enhance existing processes** – Improving sorting, remanufacturing, or recycling efficiency
- **Validate & refine CIRCULOOS digital tools** – Using real-world data to optimize lifecycle tracking and sustainability assessment

CIRCULOOS has established **three pilot cases** as testbeds for circular manufacturing solutions, focusing on innovative concepts for **leather scrap reuse, reclaimed wood (introducing the "wood as a service" concept), and plastic recovery by increasing the percentage of recycled materials** (for more information, please see section 3.2.5) These pilots demonstrate novel value chains for material reuse, waste reduction, and sustainable manufacturing.

In this context, **Track B: Pilot Extensions, invites individual entities**—such as **technology providers, material innovators, recyclers, upcyclers, waste collectors, complementary manufacturing factories, designers**, etc.—to join the CIRCULOOS pilot cases. These participants will bring specialized expertise and solutions to enhance existing processes, extend them, offer more sourcing options for reclaimed materials, or design and produce new products that increase circularity. **Track B: Pilot Extensions** focuses on **strengthening pre-existing pilots**. It **emphasizes regional collaboration to validate, optimize, and enhance circular strategies for industrial adoption**.

Key Activities Required for Track B: Pilot Extensions:

Participants will collaborate with pilot stakeholders and technical teams to test, refine, and integrate the tools developed within the project. These tools address critical areas such as:

- Data Sharing and Value Chain Formation: Facilitating seamless data exchange and value chain development for specific indicators improvement.
- Orchestration/Optimization and Execution Tools: Improving supply chain management and factory workflow based on specific indicators through advanced tools.
- Automated Data Capturing for Reclaimed Materials and Products: Streamlining data collection processes.
- Life Cycle Assessment (LCA) Tracking: Monitoring environmental impacts throughout product life cycles.

The experiments under Track B will focus on:

- Extending Circular Sourcing and Adding New R-Strategies: Expanding sourcing options and incorporating new circular strategies for novel products.

- Enhancing existing Pilots Capabilities: Integrating advanced sorting, remanufacturing, and recycling processes to extend life- cycle of existing products or create new products from parts or reclaimed materials.
- Validating and Improving CIRCULOOS Digital Tools: Refining CIRCULOOS tools for tracking material flows, sharing and composing production processes, assessing sustainability indices, and optimizing circular value chain management.
- Developing New Methods for Scaling Circular Strategies: Ensuring practical implementation in industrial environments with real market potential as successful circular products for inspiring further innovation.
- Capturing Real-World Data and Feedback: Refining circularity indicators to measure sustainability performance impact.

Selected participants will play a crucial role in shaping the next generation of circular manufacturing processes, contributing to the long-term transformation of European industry towards more circular, sustainable, and resource-efficient future.

3.2.2.1 CIRCULOOS Pilot Lines

Wood Pilot

In an effort to create a more sustainable and efficient business model, three independent wood-related companies have joined forces under a new consortium within the CIRCULOOS framework. This pilot project aims to integrate their operations, fostering a circular economy approach that maximizes resource utilization, minimizes waste, and enhances overall competitiveness in the industry.

The three companies operating in the Netherlands - each specializing in different aspects of the wood supply chain - have historically operated independently. Circuleren is a company specializing in modular wood projects, such as wooden houses, using both virgin and recycled wood. The company focuses on modular building materials designed for assembly and disassembly, ensuring an extended lifecycle for their products. This approach allows furniture or houses to be dismantled and repurposed once a customer no longer requires them, enabling the materials to be reused for new constructions and minimizing waste.

HERSO is another company that specializes in collecting and processing waste wood, recycling it into new, high-quality materials for various purposes. They are experts in crafting new furniture from reclaimed wood, giving discarded materials a second life.

Finally, Plennid focuses on repurposing wood from urban trees that have been removed due to disease, storm damage, or city maintenance in Rotterdam. Instead of allowing this wood to go to waste, they process and distribute it to third parties interested in using high-quality reclaimed urban wood, promoting a more sustainable approach to raw material sourcing.

The collaboration among these three companies facilitates the coordination of production processes, minimizes reliance on virgin wood resources, and reduces environmental impact. Circuleren plans to utilize wood recycled by HERSO from Plennid's reclaimed urban timber to manufacture building blocks, providing a more sustainable alternative to cross-laminated timber (CLT) panels. This partnership exemplifies a circular economy model within the wood industry, demonstrating how small enterprises can collectively achieve significant sustainability objectives, enhance profitability, and strengthen market positions. If

successful, this approach could be expanded to include additional companies, further promoting circular economy principles in the wood sector.

Plastic Pilot

In an effort to establish a more sustainable and efficient business model, three independent companies in the plastics sector have formed a synergie within the CIRCULOOS framework. This pilot project aims to integrate their operations, fostering a circular economy approach that maximizes resource utilization, minimizes waste, and enhances overall competitiveness in the industry.

The two companies, each specializing in distinct aspects of the plastic supply chain, have always operated independently. Thermolympic, based in Zaragoza (Spain), specializes in manufacturing plastic parts for the automotive industry using various molding technologies. The company faces challenges in incorporating recycled materials due to customer requirements for high-quality, functional, and aesthetically precise parts. Currently, Thermolympic does not recycle its plastic waste, opting for incineration, which releases pollutants and contributes to environmental impact. Contenedores Lolo, the second company located in Spain, focuses on collecting and processing waste plastics. They purchase and collect plastics from wholesalers and retailers, aiming to provide high-quality recycled materials for various applications.

Canonical Robots is the third party in this pilot, contributing to the synergy by offering technological solutions to enhance recycling processes, aiming to improve efficiency and effectiveness in transforming waste plastics into valuable materials.

Thermolympic plans to utilize recycled plastics processed by Contenedores Lolo, incorporating them into their manufacturing processes to produce components that meet both recycled content and quality requirements. Canonical Robots will help to sort the plastic waste of Thermolympic to be processed in Contenedores Lolo. The collaboration among these three entities facilitates the coordination of production processes, minimizes reliance on virgin plastic resources, and reduces environmental impact. This partnership exemplifies a circular economy model within the plastics industry, demonstrating how small enterprises can collectively achieve significant sustainability objectives, enhance profitability, and strengthen market positions. If successful, this approach could be expanded to include additional companies, further promoting circular economy principles in the plastics sector.

Leather Pilot

In this pilot, two independent companies in the leather industry located in Hungary have joined CIRCULOOS project to improve the sustainability of their leather products. This pilot aims to integrate their operations, fostering a circular economy approach that maximizes resource utilization, minimizes waste, and enhances overall competitiveness in the industry.

The two companies are Mototextil Kft and B&A, each specializing in distinct aspects of leather production. They have been operating independently until now. Mototextil Kft specializes in manufacturing leather products but currently incinerates leftover leather scraps, leading to significant environmental impact. B&A focuses on producing small leather goods, also generating waste during their manufacturing processes.

Through this collaboration, Mototextil Kft will supply its leather scraps to B&A for repurposing into new products, effectively reducing waste and minimizing the need for virgin materials. Any materials not utilized by B&A will be listed on a shared marketplace, allowing other interested parties to repurpose them, further promoting sustainability within the industry.

This partnership exemplifies a circular economy model within the leather industry, demonstrating how small enterprises can collectively achieve significant sustainability objectives, enhance profitability, and strengthen market positions. If successful, this approach could be expanded to include additional companies, further promoting circular economy principles in the leather sector.

3.3 Adopting CIRCULOOS tools

CIRCULOOS aims to establish a Circular Manufacturing (CM) ecosystem with the vision to bring together tools and a pioneering ecosystem of circular value chain actors, thus becoming the European Hub for Circularity in the European regions. The initial version of tools and platform has been co-developed by CIRCULOOS consortium including technical teams and 3 initial value chain pilots already partners.

The applicants from the Open Call #3.2 are obliged to use in their experiments the following tools as:

- Mandatory: RAMP Marketplace, Circuloos data platform,
- Optional: Supply Chain Optimization tool, Supply Chain Digital Twin, Supply Chain Orchestrator, LifeCycle Assessment Tool

It is noted that in cases where the mentoring team and the CIRCULOOS Consortium find that added value can be gained ,in the supply chains created by OC3.2, they may recommend the use of some of the optional tools. This is to be understood as a collaborative effort between the OC3.2 experiments and the responsible owner of the CIRCULOOS tool. In any case, clear identification of the necessary data for each of the optional tools is mandatory, even if the optional tools are not selected to be implemented by the applicants.

These tools in more details are:

- **Circuloos Data Platform:** collects data from the production facilities by connecting IoT devices; data is sent to a central repository hosted by European Dynamics - respecting the ownership of data; data models have been created for the entities handled by the project; the experiments will need to extend these data models if different business entities are handled by the experiment.
- **Supply Chain Optimization tool (SCOPT)**: is a tool that proposes optimal (or optionally sub-optimal) solutions to intra-factory logistics of the pilot or the circular supply chain arrangement based on data available on the Data Platform. The optimization metrics are based on the available LCA indicators. For the utilization of the SCOPT tool, information regarding the following needs to be made available: the factory input resources/material, output products, waste production, internal processes as well as the interaction of the factory with suppliers and consumers. Moreover, information of envisioned or active circular supply chains should be provided that are based on real data (i.e. actual supply chain actors). For each of the above information categories, an array of alternative options (wherever possible) needs to be provided. An example could be the following: consider the Factory X utilizes 4 different raw materials that pass through 5 different operations in order to produce 2 different final products and scrap. The Factory X interacts with Factory A and Factory B to receive raw materials, with Factory D to provide its final products and with Factory E

to provide its scrap. The raw materials are considered as input resources, the final products are considered as output products and the scrap is the waste. Moreover, the suppliers and the consumers are needed to be specified. In this example the suppliers of Factory X are: i) the Factory A that provides raw material A and raw material B and ii) Factory B that provides the raw material C and raw material D. The consumers of Factory X are: i) the Factory D that receives the final products and ii) the Factory E that receives the scrap. Additionally, the relevant cost indicators should be provided for each process (i.e. CO_2 emission or energy consumption per process). Following this example, the intra-factory logistics of Factory X as well as the interaction of Factory X with suppliers and consumers is defined.

- **Supply Chain Digital Twin (SCDT):** is a tool to simulate and visualize the factory operation and its supply chain arrangement. SCDT uses the data available on the Data Platform to provide a visual representation of the factory inputs, outputs, and internal processes as well as the interaction between the factories in the supply chain. SCDT can simulate the solutions for the factory or the supply chain provided by the SCOPT. SCDT requires the same information that is provided to SCOPT.
- **Supply Chain Orchestrator:** orchestrator of business and manufacturing processes using Business Process Models; it is backed by a cloud deployment of the Camunda Engine and uses standard Business Process Management Notation (BPMN).
- **RAMP Marketplace:** acts as the entry point for accessing the technical tools of the Circuloos platform, the registration of businesses adopting circularity practices, their interaction (in the form of establishing new business relationships) and the finding of available resources or potential collaborators.
- **LifeCycle Assessment Tool (GRETA):** retrieves data, mainly LCI (Life Cycle Inventory), calculates environmental indicators, and reports these assessments back to the Circuloos Data Platform. This data can be utilized by other tools, such as Supply Chain Optimization, to perform various analyses and optimizations at both the factory process and supply chain levels. GRETA may also directly interact with end users, including sustainability experts from MSMEs, workers, and employees, through the front end, providing valuable insights into the environmental impacts of specific processes and products. GRETA platform should be utilised to assess the benefits in term of environmental point of view by the consortia built during the Open Calls. The use of the platform will be either direct (i.e. the end users from the consortium interact with the platform) or mediated by SUPSI as owner of the solution and of the expertise in environmental assessment. The use of other tools, for instance provided and/or already in use within the consortia, for the same purpose is not allowed as the scope of the open call is to test the CIRCULOOS platform and application landscape.

3.4 Funding Conditions

The CIRCULOOS Open Call 3.2 (OC3.2) provides financial support to selected **single entities**, ensuring they have the necessary resources to enhance existing value chains, introduce new R-strategies, and demonstrate the extension of product or part life cycles.

Open Call #3.2 will fund **single entities** (Manufacturing SMEs, Mid-Caps, or Technology Providers) with a fixed lump sum of up to **€60,000**.

- **Maximum Grant: €60,000** per entity.
- **Funding Rate:** The applicable funding rate is **60%** of eligible costs for commercial entities. *(Research Organizations and Universities are entitled to 100% funding rate as non-profit entities).*
- **Total Call Budget:** An estimated number of approximately **10 entities** will be funded, up to the exhaustion of the total available budget of approximately **€600,000**.

Disbursement of Funds: Funds will be disbursed based upon the successful delivery and approval by the CIRCULOOS project of the submitted technical/business reports and demonstrators. The implementation program will run for **6 months**, scheduled to launch immediately upon contract signature.

IMPORTANT NOTE ON CO-FUNDING: Applicants must be aware that to receive the **60% funding** from CIRCULOOS Open Call #3.2, they must contribute **40% of their own funds**.

- **Example Calculation:** To receive the maximum grant of **€60,000**, the applicant must present a total project budget of **€100,000**.
    - **CIRCULOOS Grant:** €60,000 (60%)
    - **Applicant Contribution:** €40,000 (40%)

If an applicant presents a budget lower than €100,000, the grant will be reduced proportionally to remain at 60% of the total costs.

Financial Support Framework (FSTP): The financial support is provided through the **Financial Support to Third Parties (FSTP)** framework, meaning recipients are not direct beneficiaries of Horizon Europe but instead receive funding through the CIRCULOOS project (Cascade Funding).

Budget Transparency & Evaluation: To maintain financial transparency, each entity must provide a detailed budget breakdown as part of their proposal submission.

- This must include estimated costs for **personnel, subcontracting, equipment, travel, and other relevant expenses**.
- The budget should align with the project objectives (resolving the "missing link") and reflect a cost-effective approach to achieving measurable results in the short 6-month timeframe.
- The coherence and realism of the budget will be strictly evaluated under **Criterion 3 (Implementation)**.

Selected applicants under CIRCULOOS Open Call 3.2 will receive funding through a sub-grant funding agreement with the CIRCULOOS consortium. The funds originate directly from the **Horizon Europe programme,** under the European Commission Grant Agreement **No. 101092295**. These funds remain the

property of the **European Union** until the final balance payment is completed. The management rights of these funds have been transferred to the **CIRCULOOS project consortium** in accordance with the terms outlined in the grant agreement.

As part of the funding process, beneficiaries will enter into a **Sub-Grant Agreement (Annex III)** with the CIRCULOOS consortium, which establishes the financial, technical, and reporting obligations that the funded projects must comply with. This agreement will outline:

- The **funding structure,** including maximum financial contributions and payment conditions.
- The **monitoring and reporting requirements**, ensuring proper documentation and progress tracking.
- The **obligations of sub-grantees to align with Horizon Europe** regulations, including compliance with ethical standards, open science policies, and dissemination of results.

The CIRCULOOS consortium is responsible for **overseeing the disbursement of funds** and ensuring that selected projects meet the necessary criteria and milestones as set by the European Commission. Beneficiaries are required to **adhere to the contractual obligations** stated in the Sub-Grant Agreement, ensuring their activities contribute to the overarching objectives of CIRCULOOS in advancing **circular manufacturing solutions**.

3.4.1 Activities that can be funded

- Personnel costs associated with development, deployment and integration activities
- Software, hardware and data justified for the needs of the demonstrator implementation
- Access to and use of infrastructure justified for the needs of the project
- Audio/visual products and other communication activities related to the project
- Travel for meetings with CIRCULOOS team, workshops, events and promotion of project results
- Promotion & dissemination of the demonstrator outcomes and CIRCULOOS project

3.5 Application Process

All applications for the CIRCULOOS Open Call 3.2 must be submitted online through the F6S platform. This is the central hub for managing your submission, and tracking your evaluation status:

3.5.1 Steps for Submission

Applicants must follow these steps when preparing their proposal:

- Create an F6S account (or log in if they already have one).
- **Navigate to the CIRCULOOS Open Call 3.2 page** and review all provided information:
    - Open Call 3.2: https://www.f6s.com/circuloos-open-call-3.2
- Complete the online application form on the F6S platform and provide all mandatory information.
- Attach all required documentation, ensuring:

    - Submit Annex I (Technical Annex) in PDF format with the following naming: **[Lead_Applicant_Name]_OC3.2_Technical_Annex.pdf.**

    - Submit Annex IV (Declaration of Honour) in PDF format with the following naming: **[Lead_Applicant_Name]_OC3.2_Declaration_Honour.pdf.**
- **Review contractual obligations in advance:** Applicants are strongly advised to review Annex II (Sub-Grant Agreement) and the relevant Declarations of Honour before submission, as they will be mandatory for selected applicants.
- **Ensure timely submission:** It is highly recommended that applicants submit their proposal well before the deadline to avoid last-minute issues. Late submissions will not be accepted under any circumstances.
- **Resubmission requests:** If an error is discovered before the deadline, applicants may contact the CIRCULOOS team via [support email] to request a correction. However, resubmissions may not be possible if requested within 48 hours of the deadline.
- **Deadline extensions:** Extensions will only be granted in the case of significant technical issues affecting the F6S platform. If an extension is applied, all applicants will be notified accordingly.

Failure to submit a complete proposal before the deadline will result in automatic disqualification from the Open Call.

3.5.2 F6S Platform

Submission: Applications must be submitted via the official F6S link (https://www.f6s.com/circuloos-open-call-3.2). Any other submission method will not be accepted.

- **Complete application:** All mandatory questions must be answered with no exception , and all requested documents must be uploaded. Incomplete applications will be automatically disqualified.
- **Accept terms:** Applicants must agree to the application's terms and conditions listed in the online application form. Applications that do not accept these terms will be declared non-eligible.
- **English language:** All applications and programme communication must be in English.
- **Document format:** The Technical Annex must be submitted electronically in PDF format. The application form is self-contained; additional materials and/or hyperlinks to additional information that have not been specifically requested will not be considered by the evaluators.
- **Conciseness:** Be specific and concise when answering the questions, keeping character limitations in mind.
- **Deadline:** Failure to submit the application by the submission deadline (**June 10, 2026, at 17:00 CET)**, regardless of cause (e.g., network issues, multiple browsers), is not acceptable. It is strongly recommended not to wait until the last minute to fill in and submit your application.
- **Resubmissions:** If an error is discovered before the deadline, applicants may request support to reopen and/or re-submit the proposal via support@f6s.com. However, resubmissions may not be possible if requested within 48 hours of the deadline.
- **Deadline extensions:** Extensions will only be granted in the case of significant technical issues affecting the F6S platform. All applicants will be notified of the new deadline if an extension is applied.

- **Review future documents:** Applicants are strongly advised to review the documents that will be required in the contracting phase (e.g., Annex I - Sub-Grant Agreemen) before submission.
- **Notifications:** Applicants are encouraged to enable F6S notifications for the programme in their profile settings to ensure communications regarding their application status are received.
- **Applicants list:** A full list of applicants containing their basic information will be created for statistical and transparency purposes, and shared with the European Commission.
- **Binding information:** In the unlikely occurrence of a contradiction between the information provided via the OC channels (e-mail, webinars or other means) and the information included in these Guidelines, the latter is binding.

4 How will Applications be evaluated

4.1 Eligibility Check

After submission, all proposals will go through a **formal eligibility check** to ensure compliance with basic application criteria. This process involves verifying whether the applicant meets the **eligibility criteria, namely:**

- SME legal entity (according to EC definition of SME) in Europe and associated country with a validated PIC number
- Signed declaration of honour stipulating that the entity is eligible for financing in line with eligibility rules of HE, with the possibility for requests for additional documentation if/when required
- Applicant has submitted a completed application relevant to the scope of the call before the deadline
- Applicant has not submitted more than 2 applications to the same call
- Applicant can only be awarded once and has a total fund limit of €60k with a funding rate of 60%

Proposals that **fail any of these eligibility criteria** will not proceed to the **evaluation phase**. The CIRCULOOS team will notify applicants if their proposal is deemed ineligible, and no further revisions will be allowed after the deadline.

To avoid disqualification, applicants should double-check their submissions for **accuracy and completeness** before submitting. In cases where eligibility is unclear, applicants may be contacted for additional clarifications.

4.2 Expert Evaluation

4.2.1 Evaluation Criteria

Eligible proposals will be evaluated by **a panel of two external experts and one internal expert (partner from CIRCULOOS consortium)** based on the following criteria:

Criteria	Description
1. Excellence (0-5 points)	1.1. Objectives and Circular Scenario: Clarity of objectives, well-documented circular value chain scenario (Track A/B specifics), and clearly defined R-strategy. 1.2. Novelty and Innovation: Clear evidence of the novelty introduced by comparing the solution against existing alternative business models, market trends, and linear production processes. 1.3. Technical Approach and Integration: Clear description of the technical approach to implement the demonstrator, documenting the role of the entity and the specific data shared for value chain formation. 1.4. Adoption of CIRCULOOS Technical Tools: Detailed and convincing approach for the use and necessary adaptation of CIRCULOOS technical tools (e.g., RAMP, Data Platform, GRETA). 1.5. Measurable Indicators: Specific and measurable circularity and technical KPIs identified to be improved across the value chain.
2. Impact (0-5 points)	2.1. Circular Economy Impact: Potential impact and added value to the circular economy within the specific sector. 2.2. Target Audience and Value Proposition: Clear identification of target groups and a convincing value proposition explaining why the audience would buy/use the circular product or service. 2.3. Business Opportunity and Scalability: The potential of the value chain actors to sustain, extend, or alter the value chain post-project, alongside a documented business opportunity. 2.4. Environmental, Economic, and Social Impacts: Realistic estimation and quantification of potential environmental (e.g., % reduced raw material, % CO2 decrease), economic, and social impacts (e.g., job creation).
3. Implementation and resources (0-5 points)	3.1. Work Plan and Deliverables: Technical feasibility, realistic work plan, timeline, and alignment with mandatory deliverables (Technical Integration Report, Dissemination Report, LCA/Business Impact Estimation, etc.). 3.2. Consortium Roles and Capacity: Competence and experience of the entity, along with the capacity of key personnel to execute the project within

	the defined 6-month timeline. 3.4. Budget Allocation and Justification: Convincing budget allocation, clear justification of all expenses (personnel, travel, equipment, etc.), and proper demonstration of the 40% co-funding requirement.

4.2.2 Scoring and Thresholds

Each proposal receives a **total score out of 15 points**. To be considered for funding, a proposal must:

- Achieve a minimum score of **3/5** in each evaluation category
- Receive an overall score of at least **10/15**

4.2.3 Ranking and Selection of Proposals

All applications will be ranked based on their overall score, calculated from the average scores given by the evaluators. Therefore, scores may be a decimal. Once proposals are scored, they are ranked in descending order. The highest-ranked proposals will be shortlisted for funding until the allocated budget is exhausted.

To ensure a balanced portfolio of active demonstrators and to successfully address implementation gaps within the CIRCULOOS ecosystem, the **10 available funding slots** will be distributed using the following structural rules, provided the applications pass all minimum evaluation thresholds:

- **Track A Minimum (OC#2 Enhance):** The top four (4) highest-scoring proposals applying to Track A will be selected.
- **Track B Minimum (Pilot Extensions):** At least one (1) highest-scoring proposal applying to Track B will be selected. To address a specific strategic gap identified in the previous open call round, priority for this Track B slot will be given to a proposal addressing the **Wood Pilot**.
- **Remaining Allocation (4 Slots):** The remaining budget (equivalent to 4 projects) will be allocated to the highest-scoring runner-up proposals from *either* Track A or Track B.

- In case where the number of high quality proposals from any category (Track A or Track B) is not enough to cover the intended Track, the budget will be distributed in favor of the highest quality proposals of the other Track (high quality means above the threshold 10/15 in the overall score)

Final Selection Committee Review: The final allocation of the budget will be validated by the CIRCULOOS Selection Committee. The Committee will confirm the final list of selected projects to ensure that the funded experiments provide novel capabilities, complement the existing consortium, and address specific value-chain gaps not already covered by running experiments.

All applicants will receive individual feedback on their evaluation scores, highlighting strengths and areas for improvement. Selected applicants will be invited to the grant agreement phase.

If two proposals receive the **same score**, the selection committee will prioritize the project with the **higher impact potential and feasibility of implementation**.

4.3 Appeals

Within three (3) working days of receiving (1) a rejection letter informing the proposal as non-eligible or (2) an ESR of non-acceptance, an applicant may submit a request for redress if they believe the results of the **eligibility checks** have not been correctly applied, or if they feel that there has been a shortcoming in the way their proposal has been evaluated.

In such a case, an internal review committee from CIRCULOOS will examine the applicant's request for a redress. The committee's role is to ensure a coherent interpretation of such requests, and equal treatment of applicants. Requests for redress must:

- Be related to the evaluation process or eligibility checks.
- Clearly describe the complaint (in English).
- Sent by the entity's legal representative that has also submitted the proposal.

The committee will review the complaint and will recommend an appropriate course of action. If there is clear evidence of a shortcoming that could affect the eventual funding decision, it is possible that all or part of the proposal will be re-evaluated. Please note:

- This procedure is concerned only with the general evaluation and/or eligibility checking process. *The committee will not question the scientific or technical judgement of the evaluators*.
- A re-evaluation will only be carried out if there is evidence of a shortcoming that affects the final decision on whether to fund the proposal or not. This means, for example, that a problem relating to one evaluation criterion will not lead to a re-evaluation if a proposal has failed anyway on other criteria.
- The evaluation score following any re-evaluation will be regarded as definitive. It may be lower than the original score.

All requests for redress will be treated in confidence and must be sent to the CIRCULOOS team at: circuloos-support@f6s.com

5 What happens After Selection?

5.1 Contracting

CIRCULOOS OC3.2 are supported by the following documentation, which can be accessed on the official project website (https://circuloos.eu/open-calls/). Applicants must carefully review all relevant materials before proceeding with their submission.

The following will be requested by the Entities that have been selected during contracting (after the application process) and must be completed and submitted via email

- **Annex II** – Sub-Grant Agreement (SGA) template, outlining the contractual obligations for selected beneficiaries. (Contract)
- **Annex III** – Bank Account Information Form, required for financial transactions for selected beneficiaries (Documentation accompanying the contract)
- **Annex V**– SME Declaration, assessing the SME status of selected applicants.

5.2 What is the CIRCULOOS Programme and Its requirements?

5.2.1 Programme Phases / Stages

Once selected, beneficiaries will enter a 6-month implementation program designed to ensure smooth integration into the existing CIRCULOOS value chains.

5.2.2 Project Execution Framework

Once selected, funded projects will enter the **implementation phase**, which will run approximately from **01 August 2026 to 31 January 2027**. During this period, beneficiaries must **execute their proposed activities**, achieve key milestones, and comply with reporting and monitoring requirements. Each project will be guided by a **detailed work plan and a relevant mentoring team from CIRCULOOS project**, ensuring that the objectives outlined in the proposal are effectively met.

The execution framework is structured into phases, each with defined deliverables and monitoring checkpoints. The first stage involves onboarding and initial setup, where selected entities will meet with the CIRCULOOS coordination team to finalize work plans, clarify reporting requirements, and gain access to relevant resources such as CIRCULOOS technical tools and pilots. The payment schedule is directly linked to the relevant stages of the awarded project, and payments will be disbursed in instalments according to the following tentative schedule:

Phase/Stage	Date	Requirements	Amount (%)
Pre Financing	Month 1	Sub-grant agreement must be fully signed by both parties	40%
Interim Review	Month 3	All deliverables until that month must be submitted and approved by the CIRCULOOS consortium	30%
Final Review	Month 6	All deliverables until that month must be submitted and approved by the CIRCULOOS consortium	30%

During the implementation phase, projects will be expected to engage in **collaborative knowledge-sharing activities**, leveraging the CIRCULOOS teams to exchange insights, refine methodologies, and strengthen impact. Entities working within **Track B: Pilot lines** must actively participate in technical and pilots planning and design evaluations and integrate into the existing pilots demonstrations by adding new use cases.

Project execution will be monitored through a **structured review process**, where beneficiaries submit periodic progress updates (before each Review meeting as listed above). These reviews ensure that activities remain aligned with funding conditions and that challenges are identified and addressed early. Beneficiaries who fail to meet their commitments may be subject to **corrective actions or funding adjustments**.

To ensure continuity and scalability, each project must also provide a **sustainability and some market analysis to position the new value chain in the market, and a potential roadmap for achieving this,** in its final report. This strategy should outline how the developed circular value chian can be **maintained, enhanced, or commercialized beyond the funded period**, reinforcing long-term benefits for the industry.

6 What else is important to know?

6.1 What else is important to know?

The selected entities are indirectly beneficiaries of EC funding. Therefore, selected entities are responsible for the appropriate use of the funding and must comply with obligations under Horizon Europe specific requirements as described in Horizon Europe. Specific details and guidelines related to all aspects of the responsibilities of the beneficiaries are provided in the sub-grant agreement.

6.1.1 Intellectual property Rights (IPR)

Solutions developed and results achieved by the third parties belong to the third parties. Applicants will remain the sole owners of their respective IPRs and retain the IPR for their solutions.

Regarding the evaluation and the, each external evaluator will sign an Agreement including confidentiality clauses before receiving access to the applications database to protect the applicants' intellectual property and sensitive non-disclosed information.

6.1.2 Conflict of interest

Beneficiaries must take all measures to prevent any situation where the impartial and objective implementation of the sub-project is compromised for reasons involving economic interest, political or national affinity, family or emotional ties or any other shared interest ('conflict of interest'). They must formally notify the CIRCULOOS Consortium without delay of any situation constituting or likely to lead to a conflict of interest and immediately take all the necessary steps to rectify this situation. The CIRCULOOS Open Call Consortium will verify if the measures taken are appropriate and may require additional measures to be taken by a specific deadline. If a sub-granted project consortium member breaches any of its obligations, the sub-grant agreement may be automatically terminated. Moreover, costs may be rejected.

6.1.3 Ethical Issues

CIRCULOOS Project complies with the fundamental ethical issues particularly those outlined in the "European Code of Conduct for Research Integrity".

- All applicants must submit a self-assessment ethics questionnaire, available in the Annex I - Technical & Business Proposal (template)
- If the applicant confirms the existence of potential ethical issues, they must contact the CIRCULOOS Project Helpdesk for guidance, as required.
- The CIRCULOOS Project will verify the declaration's consistency with the application contents and may contact applicants to resolve any ethical issues.
- Applications that fail to properly address ethical issues or inadequately deal with privacy aspects will be rejected.

6.1.4 Checks and reviews

The EC may, at any time during the implementation of the sub-project and up to five years after the end of the sub-project, arrange for a check and review to be carried out, by external auditors, or by the EC services themselves, including the European Anti-Fraud office (OLAF). The procedure shall be deemed to be initiated on the date of receipt of the relevant letter sent by the EC. There will be no financial checks, reviews, or audits to check costs, since beneficiaries have no obligation to document the costs incurred for the action. Checks, reviews, and audits will focus on the technical implementation of the action.

6.1.5 Confidentiality

Confidentiality obligations:

- Selected applicants are required to maintain confidential any project data, documents, invoices and other materials (in any form) during the implementation of the activities and for 5 years after project completion.
- This confidentiality period can be extended by agreement with the EC and the CIRCULOOS consortium.
- Information shared during the project, whether written or spoken, is only considered confidential if the CIRCULOOS agrees and confirms it in writing within 15 days.
- Confidential information must only be used for project implementation, unless otherwise agreed upon.
- Any information shared during the application stage will be treated as confidential.

6.1.6 Promoting the action and give visibility to the EU funding

The beneficiary must promote the sub-project, the CIRCULOOS project and its results, by providing targeted information to multiple audiences (including the media and the public) in a strategic and effective manner and to highlight the financial support of the EC.

6.1.7 Data protection

To process and evaluate applications, CIRCULOOS consortium will need to collect personal and industrial data. F6S Network Ireland Limited (F6S), will act as Data Controller for data submitted through the F6S platform for these purposes. Please see our privacy policy here. A Data Protection Officer (DPO) has been appointed by F6S generally, to ensure compliance with data protection regulations, such as the General Data Protection Regulation (GDPR), and that personal data is collected, processed, and stored in a secure manner. The F6S platform's system design and operational procedures ensure that data is managed in compliance with the General Data Protection Regulation (EU) 2016/679 (GDPR). Each applicant will have to accept the F6S terms to ensure compliance. Please refer to https://www.f6s.com/privacy-policy to review the F6S platform's privacy policy and data security policy. Apart from the F6S platform, data will also be stored in the F6S Google Drive. Please note that the CIRCULOOS consortium must retain generated data until five years after the balance of the CIRCULOOS project is paid or longer if there are ongoing procedures (such as audits, investigations or litigation). In this case, the data must be kept until the end.

7 Relevant Links and Contacts

- Contact: circuloos-support@f6s.com

- Register via:
  - OC3.2: ttps://www.f6s.com/circuloos-open-call-3.2
  - More info at: https://circuloos.eu/open-calls/

CIRCULOOS

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101092295. The herewith information reflects only the author's view. The European Commission is not responsible for any use that may be made of the information herewith included.