Methods to remove hazardous substances and contaminants from secondary raw materials

Actions should develop innovative solutions for removing undesirable substances from secondary raw materials. The substances in question could be those posing health or environmental risks and/or those whose presence could adversely affect the quality of the secondary raw material. The safe utilisation or disposal of substances thus removed should be addressed as well. Proposals are expected to provide evidence of the potential market impact that the proposed solutions could bring, including quantitative information on the size of the targeted market. The economic feasibility and overall environmental performance of the proposed solution should also be considered. The work should also produce recommendations on the design and manufacturing of materials for recyclability and for standardisation. Actions should be tackled by a multidisciplinary consortium, with significant participation of industry partners and recyclers. Participation of SMEs is desirable. Activities are expected to achieve TRL 5-6 by the end of the project.

The Commission considers that proposals requesting a contribution from the EU of between EUR 3 million and EUR 5 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Reuse and recycling of many secondary raw materials continues to be low in the EU, while landfill and incineration rates remain high. The uptake and recyclability of secondary raw materials can be hampered by the presence of undesirable contaminants, additives and even substances of concern. The removal of such undesirable substances could improve the purity of the resulting secondary raw material and mitigate potential health and environmental concerns. In addition, the removal of these substances could increase the range of potential recycling and reuse applications for the secondary raw materials.

The project results are expected to contribute to:

- increased purity and/or desirable quality of secondary raw materials;
- an increased recycling rate for, and reduced landfill and incineration of, secondary raw materials;
- reduced risk of retaining hazardous substances in recycled materials, where relevant;
- the implementation of the EU Circular Economy Action Plan and the 7th Environment Action Programme;
- the Commission Strategy on Plastics in a Circular Economy[[Communication (COM2018) 28 final: A European Strategy for Plastics in a Circular Economy]] and to the implementation of the SPIRE PPP Roadmap, where relevant.

Last update: 12 April 2024

Permalink: https://cordis.europa.eu/programme/id/H2020_CE-SC5-01-2018

European Union, 2025