



Circular Economy Resource Information System

Optimising raw material reuse and recovery in electronic products

The challenge

Today, low carbon technologies account for 20% of the global consumption of critical raw materials (CRM) with estimates for 2030 predicting a doubling from 2010 values. These technologies, characterised by low emissions and low environmental impact, are essential to create a more sustainable future. However, the raw materials needed to keep up the production of these economically and environmentally beneficial inventions, are scarce in Europe.

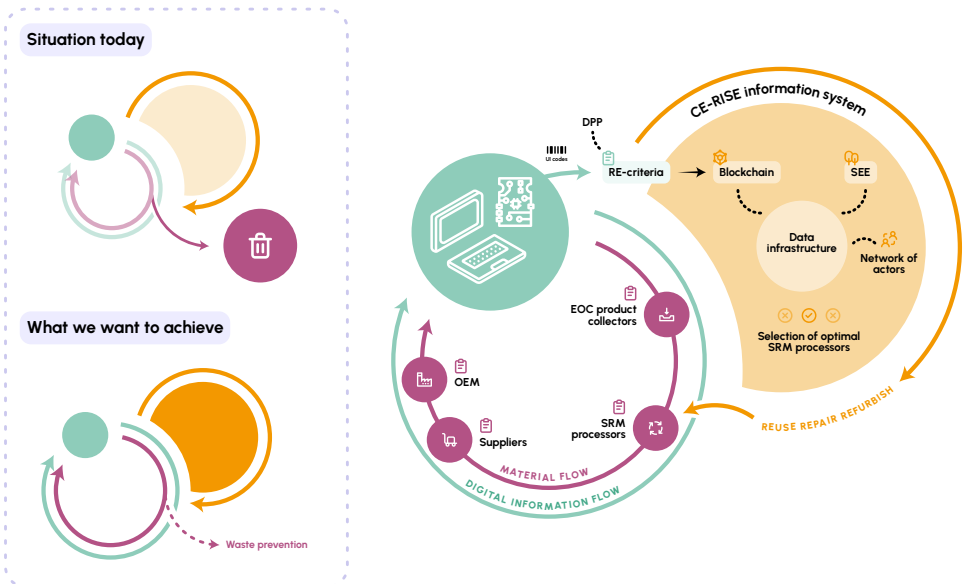
The European Union's response

As part of its efforts to address these challenges, and to increase Europe's control over the supply of critical and secondary raw materials, the European Commission is preparing the general requirements for the establishment of **digital product passports**. These passports will share product information from across the value chain, from raw materials through design and production to reuse and recycling.

What will CE-RISE do?

CE-RISE aims to create an information system that will share detailed data on electronic products. To do so, it will address the ongoing challenges of:

- varying interests and capacities of actors in the value chain,
- a lack of transparency and traceability in the supply chain,
- a lack of a common tool for effective communication and planning amongst upstream and downstream stakeholders,
- insufficient oversight on secondary raw material stocks and flows in the technosphere.



The functionality of the CE-RISE information system will be evaluated by five case studies in which Digital Product Passports are developed for:



**ICT
products**



Printers



**Solar
panels**



Batteries



**Heating
systems**

CE-RISE will develop and pilot an IT system that identifies optimal solutions for the effective reuse, recovery, and recycling of materials.

Stages of the project

1. Defining a set of criteria to evaluate the extent to which products and embedded components can be reused, repaired, refurbished and/or recycled – the so called 'RE criteria';

2. Incorporating information on RE criteria and material composition of products into a Digital Product Passport to enable traceability of materials in the supply chain;

3. Integrating Digital Product Passports with information on the product environmental footprint (PEF), and socio-economic and environmental (SEE) impacts of RE processes;

4. Enabling confidential and anonymised information sharing among actors throughout value chains;

5. Providing open access software application to disseminate information on the assessment of RE criteria, product environmental footprint and socio-economic and environmental impacts of products to all stakeholders including consumers and policymakers.

Expected outcome


Ultimately, the CE-RISE system will provide stakeholders, including consumers, with a better understanding of the green credentials of electronic products and how to preserve important raw materials through the reuse, repair and recycling of these items.

Get involved

It is vital that the CE-RISE project engages with a wide range of relevant stakeholders to understand their needs, issues and opinions. Join our stakeholder network, via the Get Involved page on our website, to be the first to receive updates about the project and invitations to events and consultations.

 @CE_RISE_Project

 CE-RISE Project

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CIRCULARISE



MORROW

NIKKELVERK
A GLENCORE COMPANY



REPIC

ROS
return of silicon



Vianode

VIESSMANN



START DATE:
January 2023



END DATE:
December 2026



26 partners
FROM 11 COUNTRIES



Funded by
the European Union