NEWSLETTER

CIRCULAR CIRCUITS

EDITION: July 2026

WORKSHOPS

Workshop Design for Recycling TU Delft 29 september 13.00 - 16.00 uur (in Dutch). Op basis van onderzoek naar de recyclebaarheid van producten in het kader van dit onderzoeksproject is deze kosteloze praktische workshop ontwikkeld. In deze workshop haalt u en (indien gewenst) uw collega uw eigen product letterlijk uit elkaar om te ontdekken wat het wel of niet recyclebaar maakt. Door middel van demontage, het in kaart brengen van de recyclebaarheid en begeleiding door een recyclingdeskundige doet u in minder dan drie uur concrete ontwerpinzichten op. Aanmelden via j.h.welink@tudelft.nl

Workshop on ISO Standards for Circular Supply Chains on 16 November 2026. This free workshop explores how international standards can support circular economy implementation across organizations, supply chains, and value networks. The workshop takes place at the Erasmus University Rotterdam.

PUBLICATIONS

Assessing historic material losses in European waste from electrical and electronic equipment (paper by Nils Pauliks PhD). Losses across collection, pre sorting, and recycling for 59 elements in 54 products across the EU 27 (2006–2021) were analysed, and it was found that insufficient collection is the dominant loss driver, with additional but smaller losses occurring during sorting and recycling. Losses are highly uneven; specialty metals have highest lost rates across all elements. Furthermore, 16 products were identified which contribute most to the lost elements and have thus the highest potential to recycle more. The amount of critical raw materials WEEE contains and how much of the CRMs are currently lost. All the data, including detailed material composition data to be found in this repository.

SYMPOSIA AND CONFERENCES

Organics-free Porous Nano-dendritic Cu Films for High-Power Packaging Interconnects. Presented by PhD candidate Fatin Battal at the 76th IEEE Electronic Components and Technology Conference (ECTC) in Orlando, USA. The paper can be read via this link.

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The design for recycling of electronics guide: from recycling practice to design method. Presented by Dorien van Dolderen at the DESIGN 2026 conference in Cavtat Kroatië. The paper can be read via this link.

Presentation on the hydrometallurgical recovery of critical metals from waste printed circuit boards (WPCBs). In April, PhD candidate Fabian Kadisch gave this presentation at the Maurits van Camp Symposium in Antwerp, Belgium, held by the "Gesellschaft der Metallurgen und Bergleuten e. V. (GDMB)". The symposium was held in honor of Maurits van Camp to discuss our common future in extractive metallurgy and recycling.

Presentation on the environmental impacts of primary versus recycled metals in electronics. Nils Pauliks and Pablo Ilgemann presented their work on the NWO NAC 2026 conference on the 9th and 10th of April. The presentations were on the environmental impacts of primary versus recycled metals in electronics and a review of current knowledge on circularity strategies in the electronics sector.

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Circular Circuits project presented at the Meeting Your Peers Engineers #8 at Noviotech Campus June 24th.

Circular Circuits PhD's Fatin Battal (Radboud University), Jasper Coppen (TU Delft), Michiel Brebels (TU/e) and Sjoerd de Jong (TU Delft)) shared insights into the technical challenges that influence the reliability and lifetime of microelectronic systems. Michiel van Soestbergen (NXP) started the presentations by presenting the Circular Circuits project. Topics included electronics failure modes, corrosion, transport phenomena, packaging-related reliability issues, and the role of simulation and modelling in understanding and predicting product performance over time. More in this link.

Presentation environmental impacts electronics at Berenschot consultancy, June 2026

Nils Pauliks presented his work on the environmental impacts of metals from primary and secondary supply in electronics.

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VISIT

Presentation on the hydrometallurgical recovery of critical metals from waste printed circuit boards (WPCBs).

From March to May 2026, PhD candidate Meihui Jiang was a visiting researcher at Georgia Institute of Technology in the US. The visit facilitated academic exchange on circular economy and sustainable operations management and contributed to strengthening the spread of Circular Circuits' impacts and the collaboration with international research partners. Please read her blog on the:

- research visit in Georgia Tech Brook Byers Institute for Sustainable Systems
- flash talk at the 2026 Early Career Sustainable Operations Management Workshop at the Naveen Jindal School of Management, UT Dallas
- presentation at the Production and Operations Management Society (POMS)
- closure of the visit

Please check for frequent updates on the project website www.circularcircuits.nl and our LinkedIn page.