

FROM E-WASTE TO DIGITAL INCLUSION



How Epanekkinisis is building the technical backbone of a circular ICT value chain through CIRCULOOS

REboot EQuality (REQ) • Horizon Europe • Oct 2025–Oct 2026

Circular technology. Measurable impact. Devices returned to use.

THE CHALLENGE

Useful technology should not become waste.

REQ connects circular economy infrastructure with a concrete social need: access to digital equipment.

THE LINEAR MODEL

DEVICE → **DISCARD** → **E-WASTE**

REQ CHANGES THE FLOW

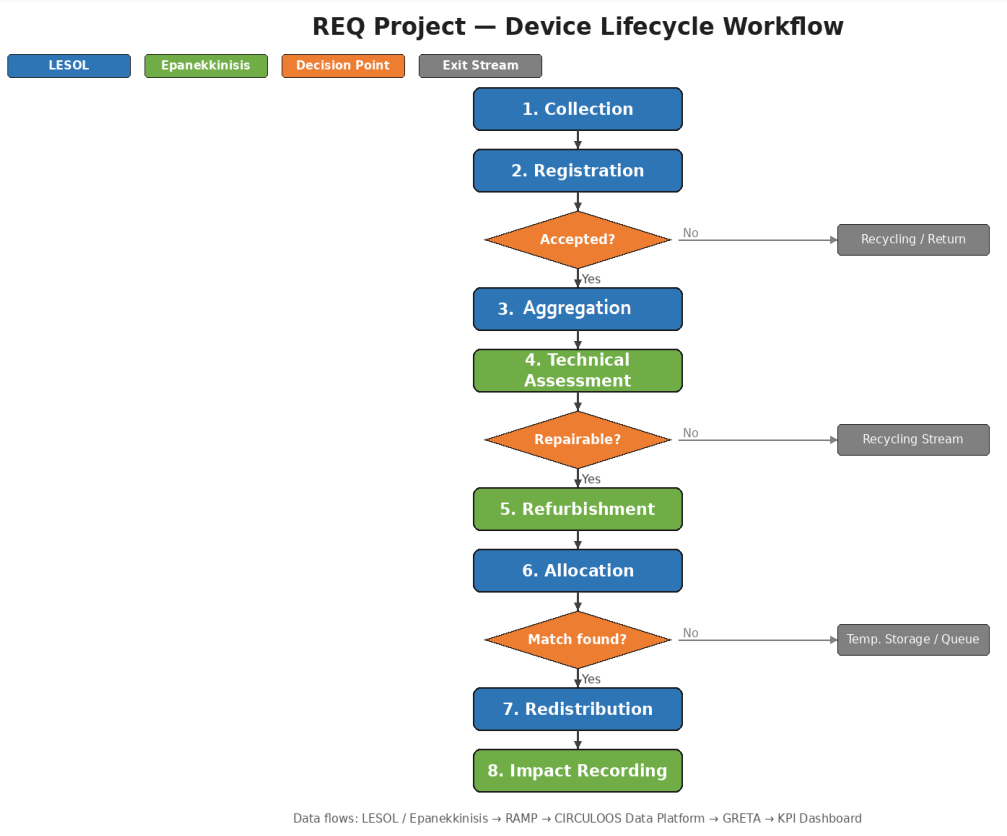
**Collect → assess → refurbish →
redistribute → measure impact**

A closed-loop ICT value chain designed for replication across Greece.

THE EXPERIMENT

REboot EQuality: a circular ICT value chain in action.

Implemented under CIRCULOOS Open Call 2 as an Experiment for Demonstration (EXD).



Epanekkinisis is the lead technical partner

Its role starts where the device becomes a technical circularity challenge — and continues through platform integration and environmental impact measurement.

01

Assess

Repairability

02

Refurbish

Repair + upgrade

03

Integrate

Data + LCA

EPANEKKINISIS IN THE VALUE CHAIN

Technical circularity, translated into traceable data.

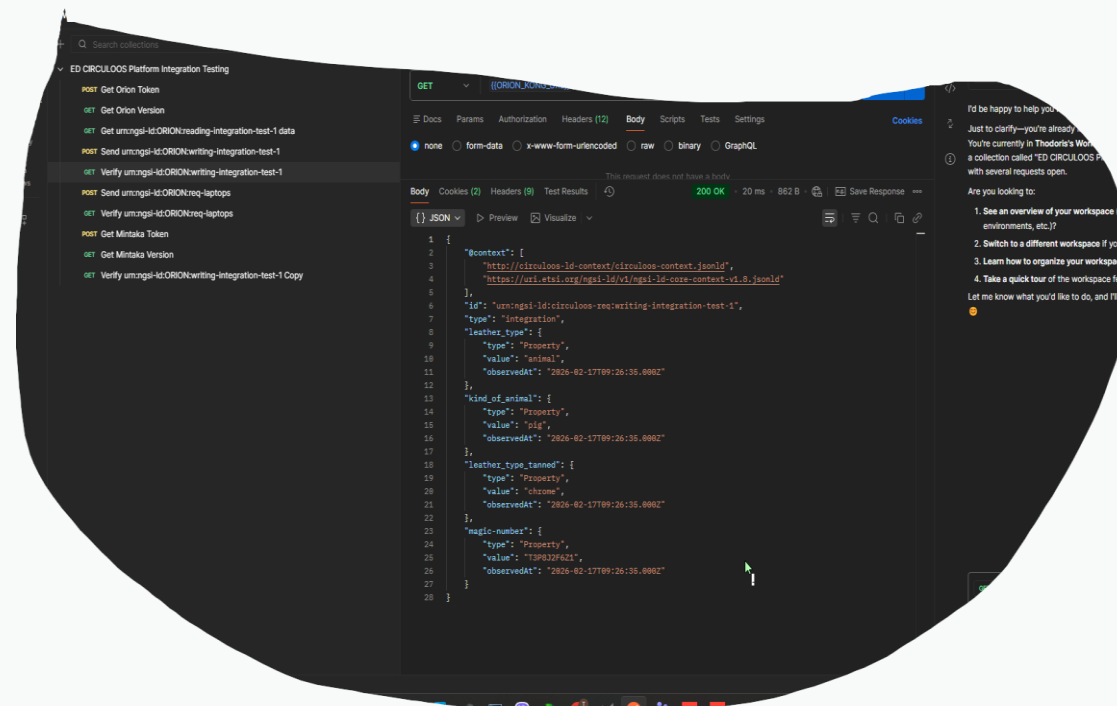


Every device becomes a traceable circular asset — not an anonymous unit of waste.

DIGITAL BACKBONE

Connecting physical refurbishment with the CIRCULOOS Data Platform.

At M6, Epanekkinisis demonstrated authenticated read/write connectivity using the NGSI-LD standard.



VERIFIED INTEGRATION

- ✓ Authentication
- ✓ Data write — HTTP 201
- ✓ Data read — HTTP 200
- ✓ Temporal API query

Testing session: 17 Feb 2026 • written confirmation followed from European Dynamics.

IMPACT FRAMEWORK

Circularity becomes measurable.

Seven KPIs connect operational data, technical performance, environmental impact and social value.



TECHNICAL DATA

Assessment • refurbishment • components



CIRCULOOS DATA PLATFORM

Structured, device-level records



GRETA + KPI REPORTING

LCA • CO₂e • circularity

WHY IT MATTERS

One device. Three layers of value.

ENVIRONMENTAL

Extend device life • reduce e-waste • recover components • quantify avoided emissions

SOCIAL

Return refurbished devices to communities facing digital exclusion

SYSTEMIC

Create a transparent, data-enabled model that can be replicated beyond the pilot

FROM PILOT TO MODEL

What the CIRCULOOS experiment enables next.

M6**FOUNDATIONS READY**

Workflow • dataset • RAMP profile • KPI framework • platform connectivity

M8**REAL DATA + LCA**

JSON upload • operational records • GRETA activation • first impact calculations

M12**PROVE + REPLICATE**

Full KPI measurement • final impact reporting • scalable circular ICT model

The ambition: make ICT reuse a measurable circular service — not a one-off donation.



CIRCULAR ICT, BUILT TO SCALE.

Epanekkinisis turns technical refurbishment into a traceable, measurable and replicable circular value chain.

REBOOT EQUALITY

Circularity

+

Digital inclusion

+

Data-driven impact