Recycling Mobile Phone Impact on Life Cycle Assessment

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The Problem
How does different mobile phone Printed Circuit Board (PCB) recycling system have an impact to the toxicity of waste produced?

The Life Cycle of Mobile Phones

Material Extraction → Material Production

Result
Overall Damage Score Based on Average Toxicity

Life Cycle Impact Assessment
- Overall life impact is calculated for the system considered.
- Midpoint damage categories used for the analysis.
- Weighting used to calculate midpoint damage categories.
- Endpoint damage categories, and further aggregated to endpoint damage categories.

Environmental Standard – Emission Limit

Methodology: Goal and Scope Definition
- Objective of Study
- System Boundary
- Functional Unit

Recycled materials’ demand
- The recovery of materials is strongly based on their financial value in the market.

Government legislation
- The toxicity of waste emitted from the recycling is driven by the environmental guidelines within the country.

E-waste recycling system
- The entire system should be considered when recycling such as shipping to ensure minimal environmental impact.

References