

# THE CHALLENGES OF PRINTED ELECTRONICS ON CELLULOSE TOWARDS A SUSTAINABLE APPROACH

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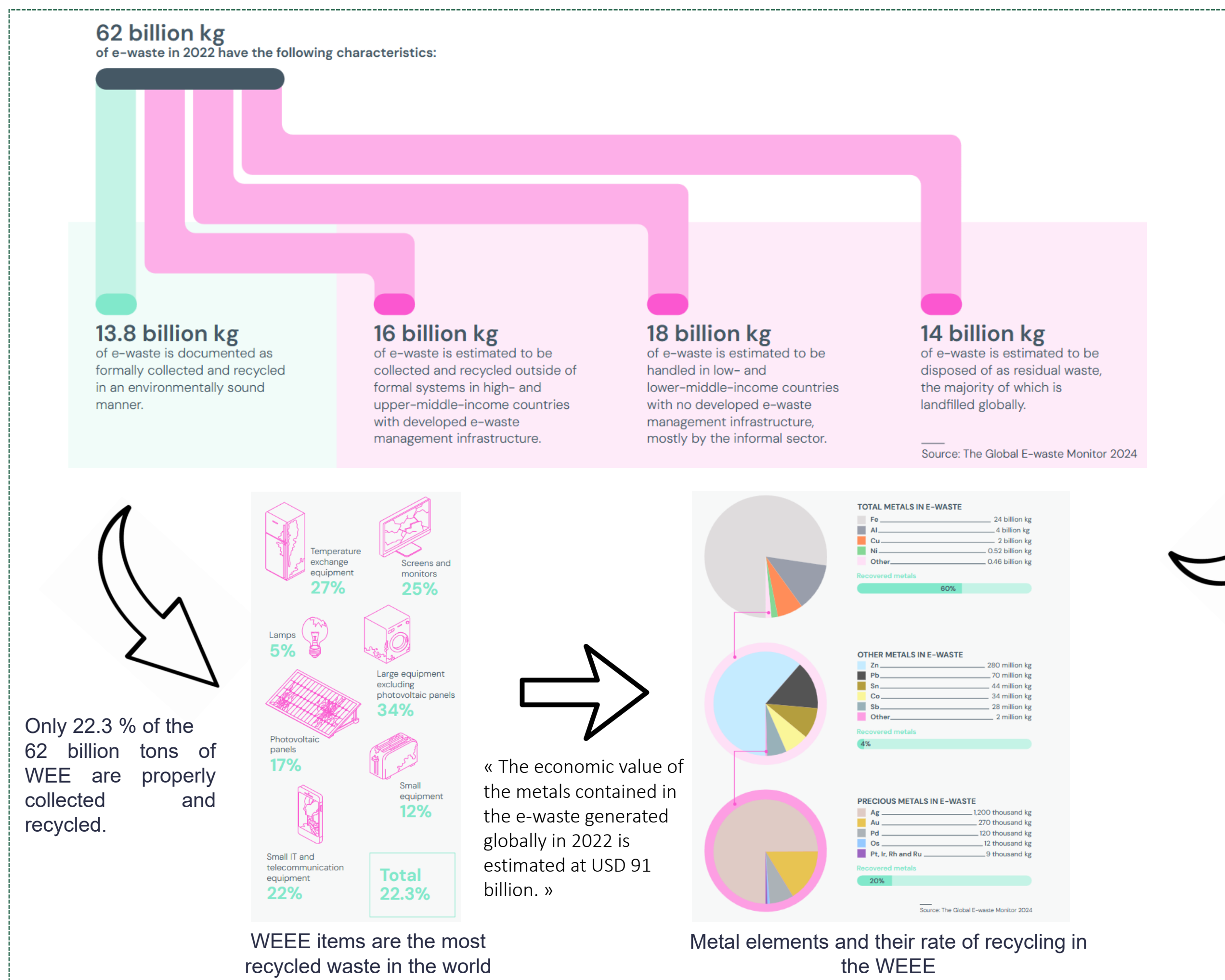
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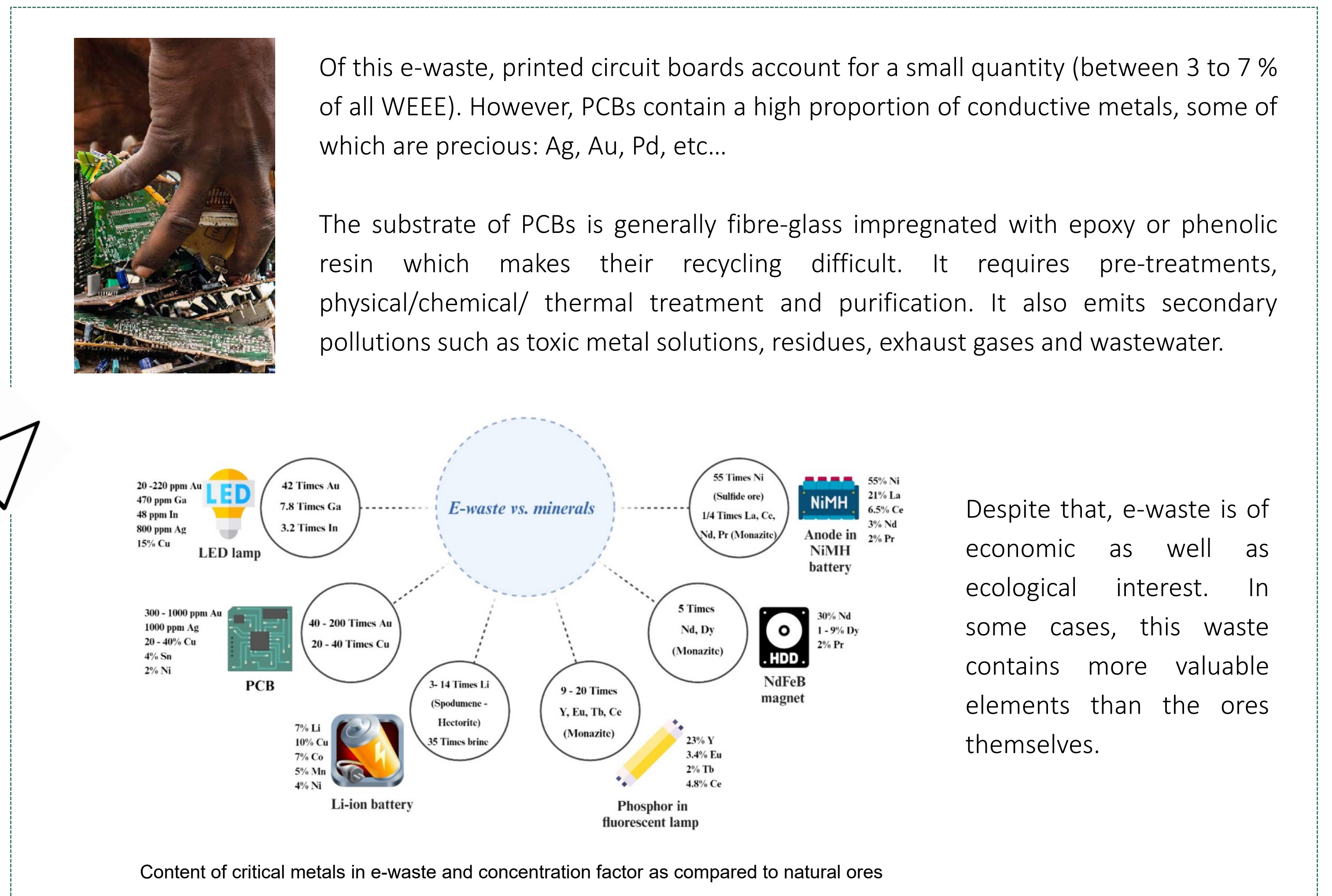


## Context

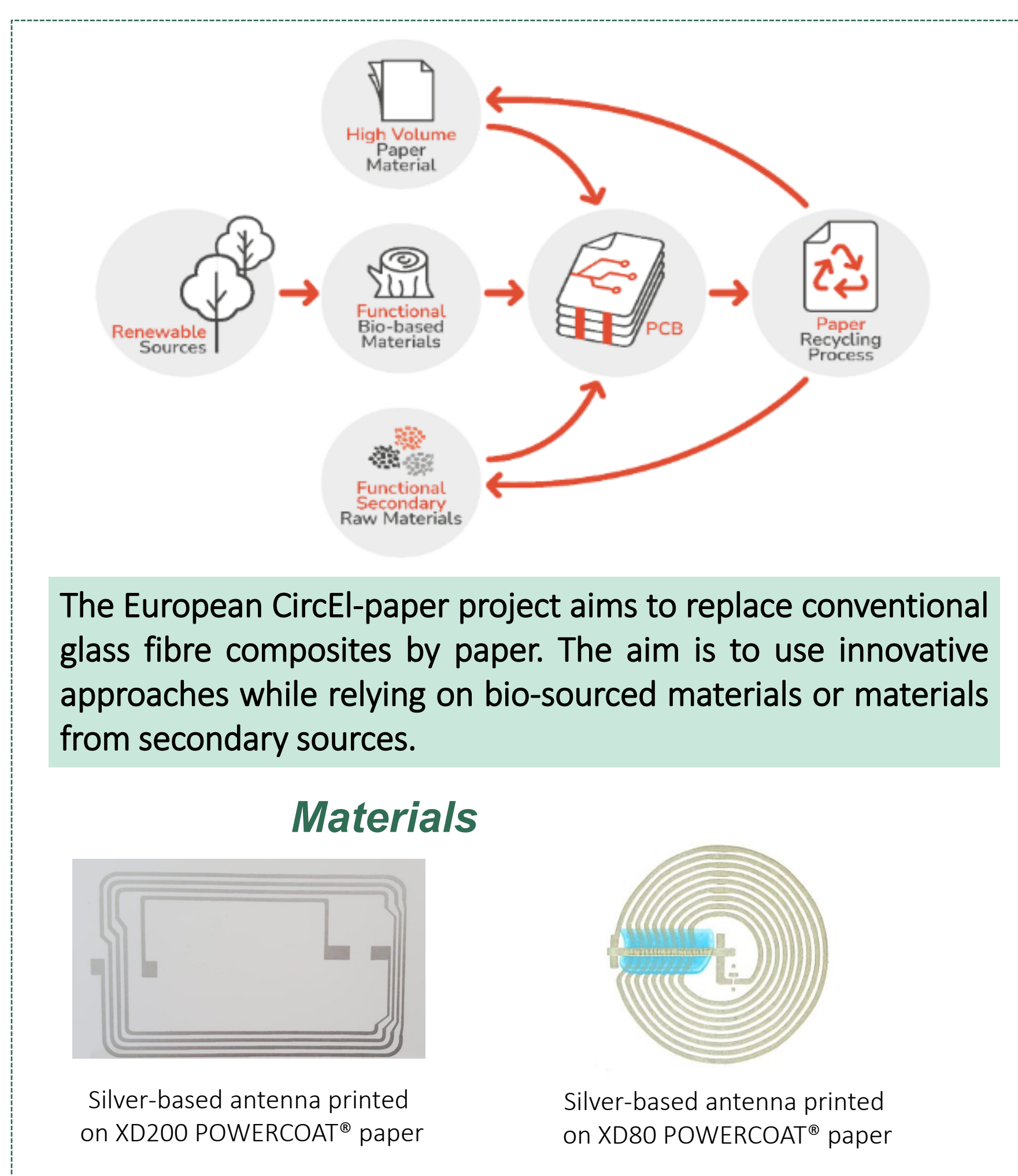
### Electrical and electronic equipment waste (WEEE) generated in 2022



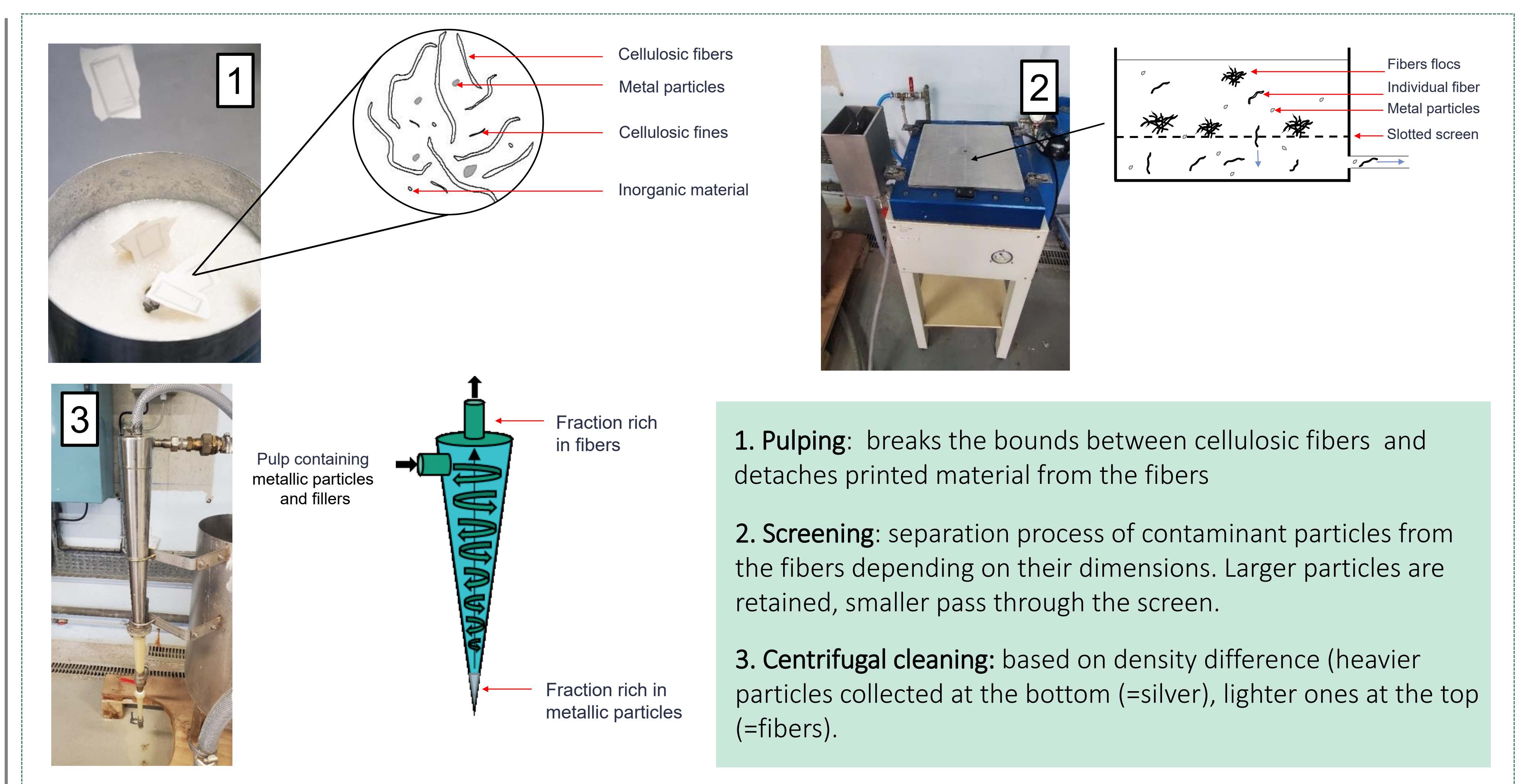
### Why should printed circuit boards (PCBs) be recycled ?



## Objectives

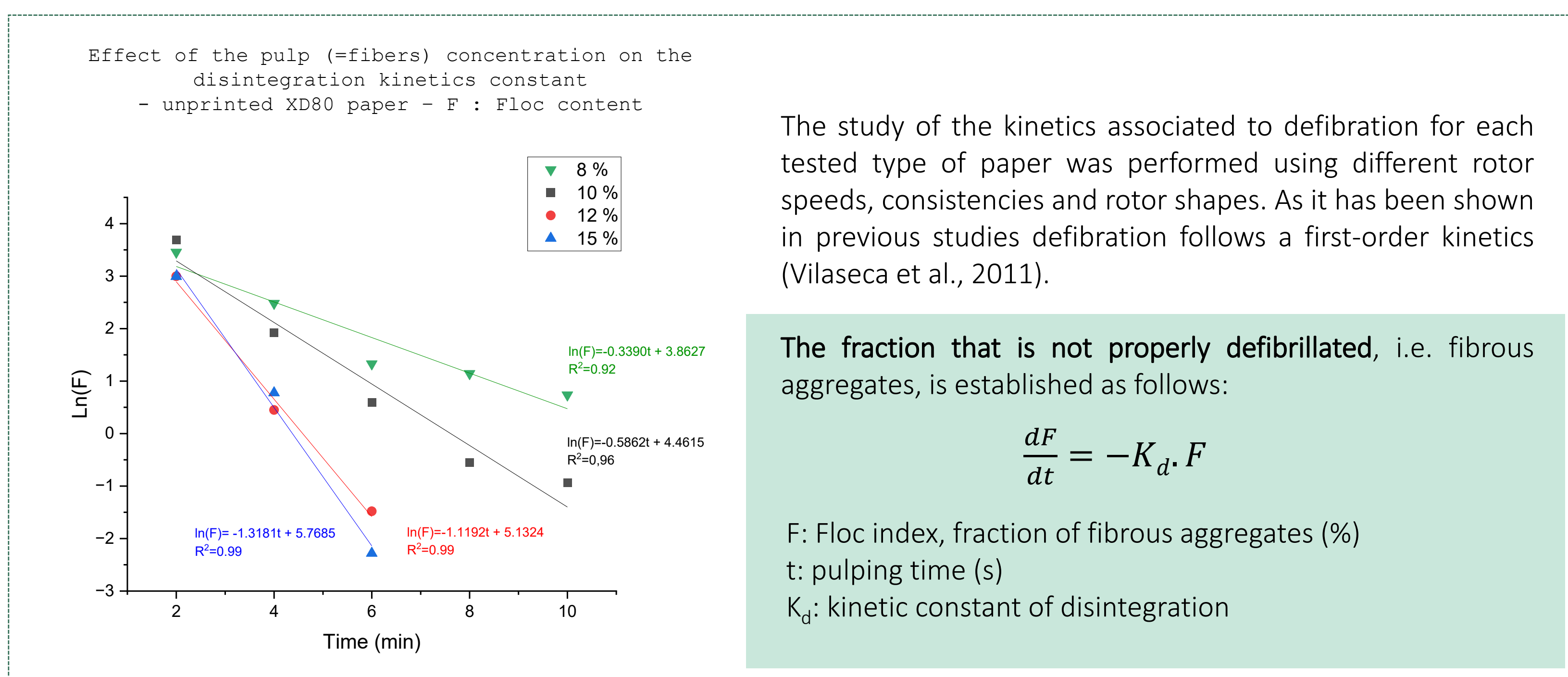


## Experimental

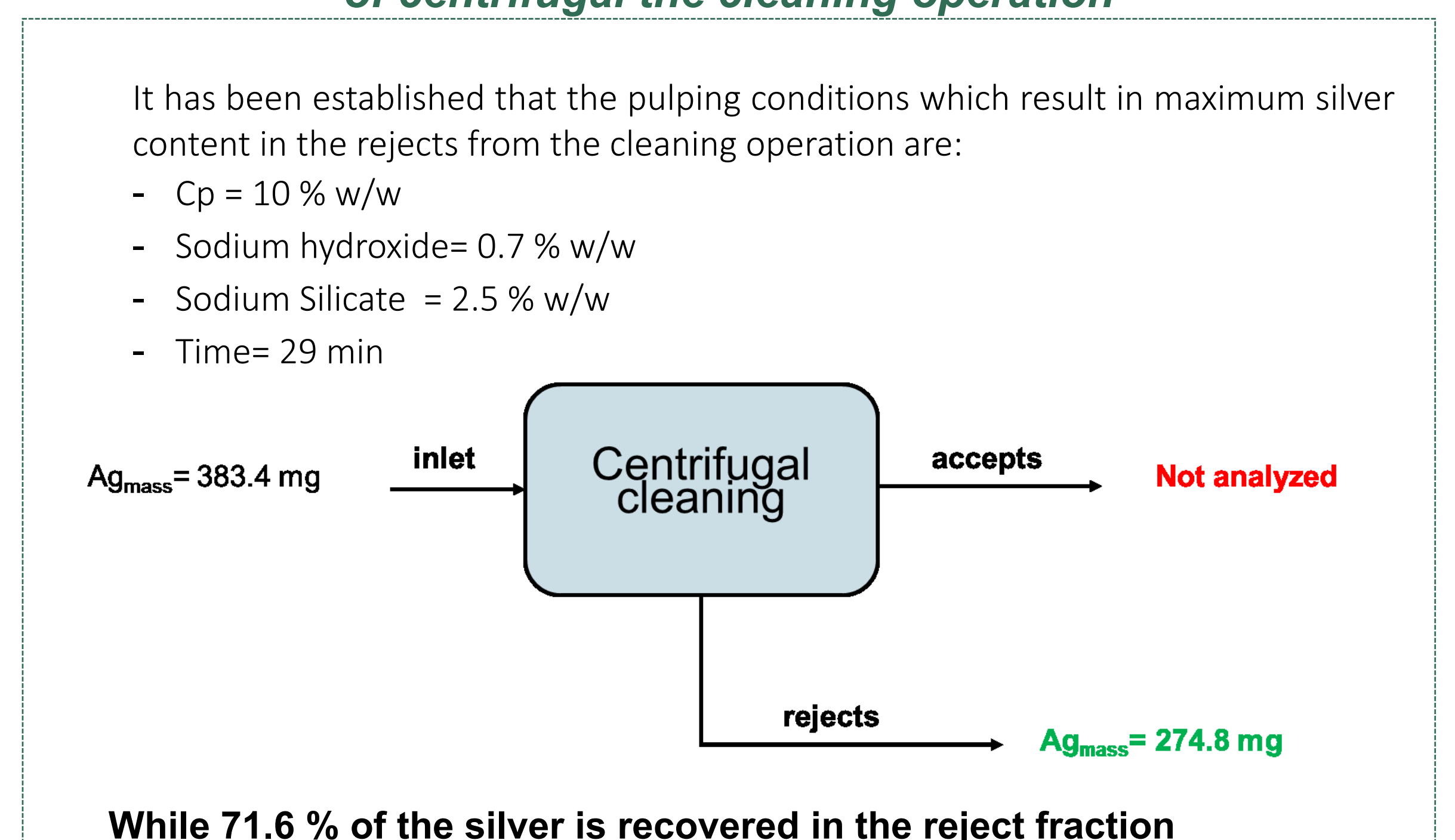


## Results

### Pulping optimization



### Matter mass balance and silver recovery of centrifugal the cleaning operation



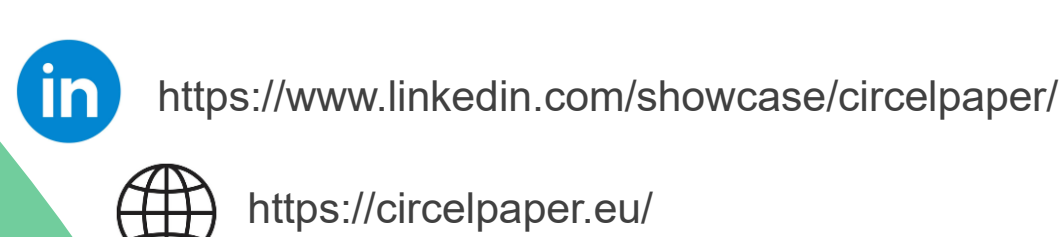
## Conclusion & perspectives

- The core of the project is to find alternative to petroleum based PCB to enhance their recyclability. Paper is chosen as an alternative support for PCB technology because it is suitable for printing electronic, biodegradable and widely recycled.
- The centrifugal cleaning operation has shown good ability in the separation of metallic particles (Ag) from the paper pulp since 72% of silver is recovered in the reject fraction.
- The presented results are obtained by recycling relatively simple tags. In the future, papers with silicone, resins or flame-retardant compounds will be studied.

## Acknowledgments

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