Large amounts of liquid crystal displays (LCDs) are entering their end-of-life stage. So, for the WEEE European directives, efforts must be undertaken to reuse or securely dispose LCD waste. Plenty of ideas on how to recycle were suggested, but no practical process was reported yet, although it is possible to recover many reusable materials, such as glass, plastic and precious metals, in particular Indium. Indium is one of the elements included by the European Commission in the list of 20 raw materials critical for economic importance and high supply risk.

The present work aims to valorize LCD scraps after Indium recovery (Fig.1) in a simple manner, with low cost both economically and environmentally speaking. This application was explored by many researchers, although most focused only on the use of glass powder waste LCD to design concrete. However, the scraps contain also plastic: the present work deals with the use of LCD scraps as it is after cross-current leaching of Indium with $\text{H}_2\text{SO}_4$.

The highest compressive strength of 4.40 MPa, was obtained with cement and lime (CEM-LIME). The washing process of LCD waste, anyway necessary, has a limited impact. The scraps can be used to manufacture mortars that the regulation classifies as CS II and CS III (compliant with a use for general works or as a plaster for indoor/outdoor). Better results could be obtained with homogenizing the sample and delving into the reasons for the low pozzolanic activity shown. The LCA showed the environmental gain for the avoided landfill.

In conclusion this solution makes sustainable the Indium recovery process.