

Debonding-on-demand: **replacement of display screens on mobile phones**

Mobile phone display screens are among the components most likely to be damaged. In many cases they can be replaced if the product has been designed with repair in mind, making the process much easier.

Repair kits are widely available to replace damaged screens. In some cases, gentle heating – not more than a household hair dryer produces – is used to loosen the adhesively bonded joint so that the screen can be removed.

For efficient repair and recycling, this process needs to be considered already in the design phase of the product. Today, specific technologies make it easier to remove adhesively bonded batteries, screens and back

covers without damaging the components. Some adhesives can be released through electromagnetic irradiation directed locally at the bonded surface, allowing the parts to be separated without affecting the surrounding materials.

Other debonding methods include mechanical or chemical techniques. These can be used when little information is available about the repairability of a device or about the behaviour of adhesives at the product's end of life.

