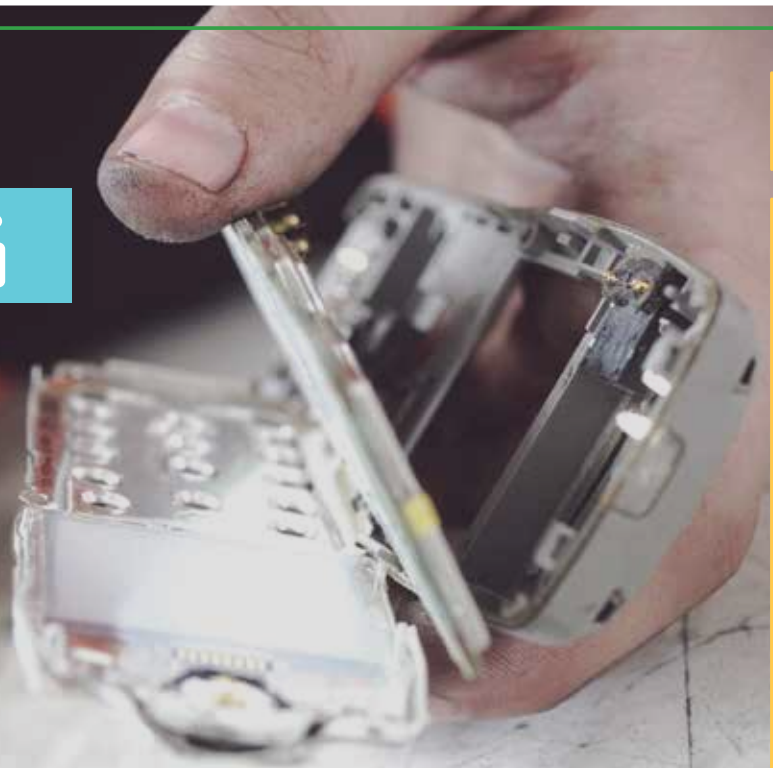


THE RECYCLING PROCESS



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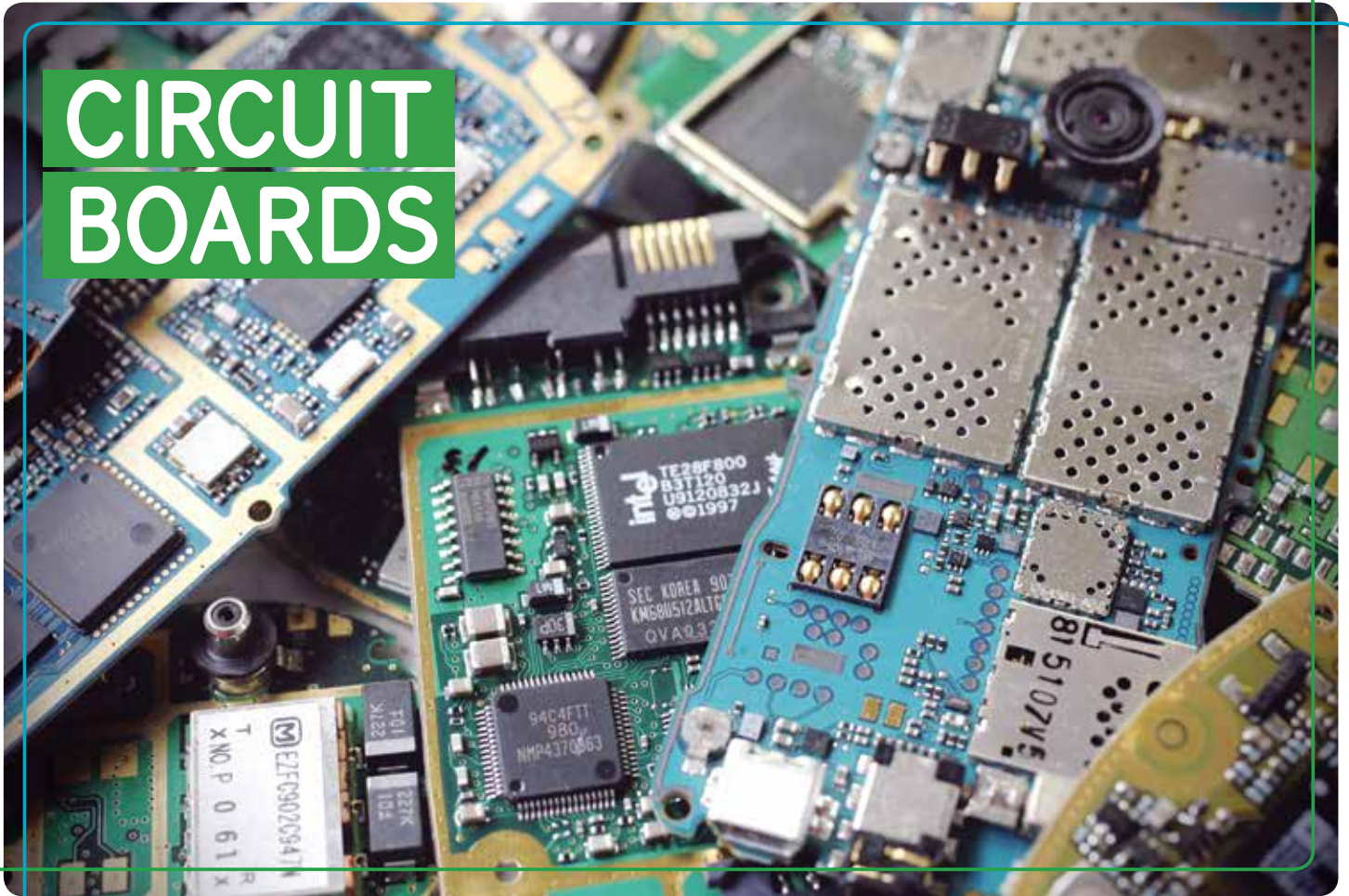
When you drop off your old mobile phones for recycling they are collected and transported to our recycling facilities in Australia.

They are sorted and disassembled into components including batteries, printed circuit boards, casings, glass screens, accessories and packaging.

These components are then further processed separately through shredding and sorting techniques to maximise resource recovery.



CIRCUIT BOARDS



CIRCUIT BOARDS

The circuit board is like the brain inside your phone, containing all the software needed to make it work. It sends signals to the screen, the camera, the speaker and just about everything else.

Metals like copper, and precious metals such as silver, gold, platinum and palladium are used for electrical connections on the circuit board and throughout the phone.

Why are these types of metals used? Because they're great conductors. Meaning they're especially good for carrying electric signals along the connection lines of the circuit board.

Tin solder is used to connect all the parts on the circuit board together. Tin is used because it has a low melting point and won't damage the other parts.



Recycling

A small amount of valuable metals including gold, silver and copper can be found on a mobile phone circuit board. These metals are separated, extracted and processed to be reused again.

Recycled metals can be reused in jewellery, coins, industrial and electronic applications. Other metals found on the circuit board are processed into metal ingots and reused.

PLASTIC CASE



PLASTIC CASE

The housing case of your phone needs to be light, compact and protective. They are usually made from plastic or aluminum. To make the plastic, crude oil has to be extracted. The oil is processed to make a polymer resin which is heated and molded to form the plastic product. Other materials are added to give extra strength.



Recycling

Recycled plastic is processed into pellets and can be turned into pallets, park benches, fence posts and polar fleece jackets. This requires less energy than would be used in making new plastic from fossil fuels.

GLASS SCREEN



GLASS SCREEN

The phone's screen is much more complex than it may seem. Your display is made up of tiny pixels that are constantly changing to make an image or video on your phone. On top of the display is a thin layer of glass which forms the screen.

The glass is made using silica which is essentially sand. It is then strengthened with other materials, usually a ceramic or metal, to make it tough and strong.



Recycling

Glass is crushed and melted so that it can be used to create new glass products and as a replacement material in construction. Recycled glass can even be used as an ingredient to strengthen road base and asphalt.

BATTERIES



BATTERIES

The rechargeable batteries in your phone power everything. It is critical that the battery is long lasting and can be recharged over and over again.

Most phones use a lithium-ion battery. Lithium-ion batteries are made from lithium and other metals such as cobalt, nickel, copper and steel enclosed in plastic.

What's so special about lithium? Lithium is a metal that can carry the electrical charge in the battery over and over again, allowing it to be recharged hundreds of times.

Recycling

Batteries are shredded and refined to separate the materials so they can be reused. Aluminium, copper and steel are processed into granules and reused in the manufacturing sector. A small amount of plastic is incinerated through the metal extraction process

A mixed metal compound of cobalt, lithium and nickel is extracted and processed into a powder to be used to make new batteries.



METALS



METALS

The housing case of your phone needs to be light, compact and protective. They are usually made from plastic or aluminum.

To make an aluminum case, bauxite is mined from the ground. It is then crushed and processed to form alumina. The energy intensive process of electrolysis is used to convert the alumina to aluminum. The aluminum is then molded or machined to the casing shape.



Recycling

Aluminium is used in a mobile phone casing and components. It is one of the most recyclable materials and uses considerably less energy than producing new aluminium. Aluminium is melted in a furnace and the liquid aluminium is then placed in moulds to create new aluminium products.