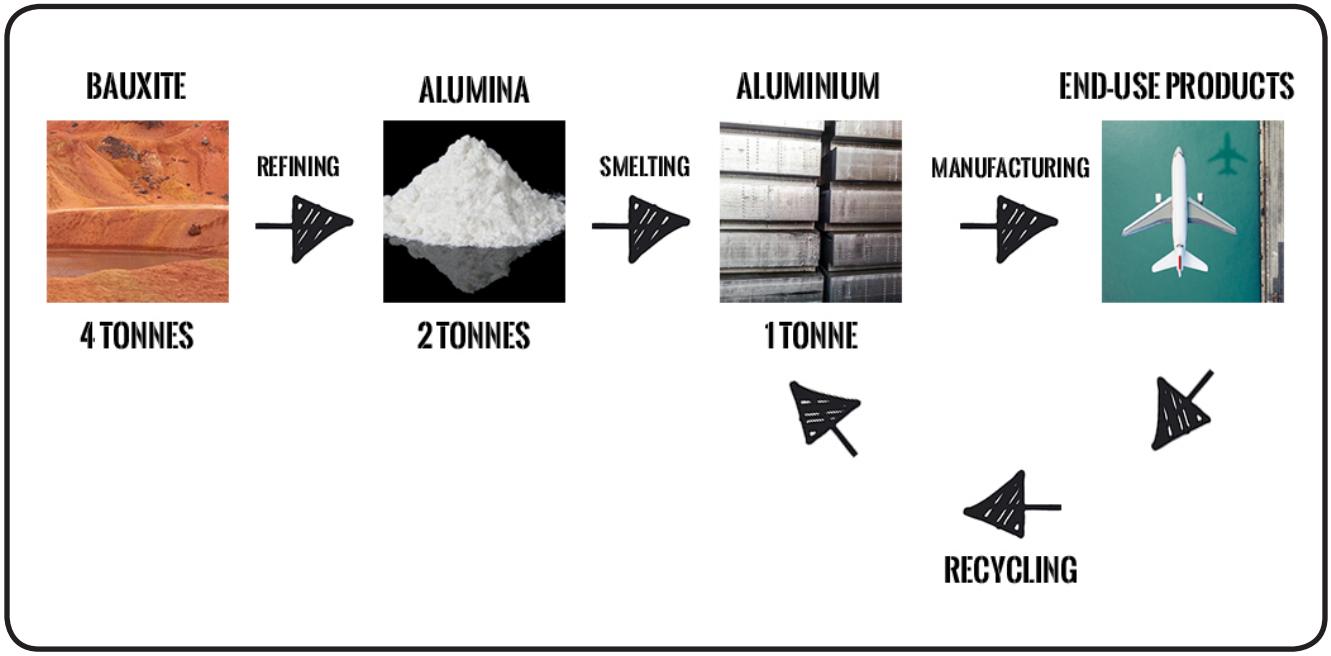
Aluminium Factsheet

How is Aluminium Made?

The production of aluminium starts with the mining of bauxite. Australia has one of the largest natural reserves of bauxite in the world. Once bauxite is mined, it is refined to produce alumina[1]. Two tonnes of bauxite need to be refined to produce one tonne of alumina. Following this, the alumina is then sent to a smelter where it is melted down and aluminium can be extracted. Two tonnes of alumina need to be smelted to produce one tonne of aluminium[2]. From here, the aluminium is now ready to be manufactured into aircrafts, roofing, cans and many other products.

1 http://bauxite.world-aluminium.org/index.php?id=208&L=0
2 https://www.acs.org/content/acs/en/education/whatischemistry/landmarks/aluminumprocess.html

Aluminium Production Cycle



Recycling Aluminium in Australia

In Australia, we are recycling two thirds of our aluminium cans but sending about a billion cans to landfill each year. The recycling of aluminium aerosol cans (e.g. deodorant cans) is only at about 49%[3], which means that for the 250 million aerosol cans Australians buy each year, most of these will end up in landfill[4].

3 http://recyclingweek.planetark.org/recycling-info/aerosols.cfm
4 http://12dos.planetark.org/documents/doc-176-aluminium-factsheet-2012.pdf

The information and statistics in this document are approximate and have been simplified for educational/illustrative purposes. They should not be relied upon for any other purpose.

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In the mid 1800's aluminium, which is the most abundant metal on Earth, was considered to be a precious metal and as valuable as silver! This was due to the costly and inefficient extraction methods used at the time to isolate aluminium. Then in 1886, independently and on opposite sides of the world, two young scientists discovered a smelting technique which would revolutionise the production of aluminium and make this material much more accessible. This technique is known as the Hall-Heroult process and honours the names of the two scientists who developed the method. Even more coincidental than two scientists developing the same method in the same year, is that both Hall and Heroult were born in 1863 and died at the age of 51 in 1914.

Source: http://lodecjinshu.com/en/hall-heroult/