[1]Aluminum Production

It is estimated that over 8% of the earth's crust contains bauxite ore, which is naturally rich in aluminum oxide ("alumina"). The world has been aware of this as early as the Babylonian Empire but was unable to efficiently isolate aluminum. It was not until the late 1800's that an American scientist, Charles Martin Hall, discovered the process that changed the world:

Step One-Mining:	Bauxite is mined and gathered.
Step Two-Refining:	Bauxite is finely ground and mixed with lime and caustic soda which produces a sugar like white powder called "alumina" (also known as aluminum oxide).
Step Three-Smelting:	The alumina is dissolved in a cryolite bath. During this molten state, a powerful electric current is passed through the bath and "aluminum" is separated from the chemical solution and powerful machines siphon off the aluminum.
Step Four-Fabricating:	Aluminum is placed into a furnace where it is melted down and mixed with other metals to produce customer specified alloys. These molten mixes are then poured into ingots which harden and then are shipped for further fabrication, such as extruding.

[1] Most of the information contained herein was gathered from Alcoa's "It all starts with dirt" program. www.alcoa.com