**Africa: where the life of our smartphone begins and ends**
From the 'blood minerals' of the Democratic Republic of Congo to the electronic waste of Ghana: what is the way our devices are doing and what can we do to change it?

The impact of the mobile device industry on our lives is immense. Although we are aware of the extent of this expanding giant and are aware of the latest technological innovations, we do not know where they have been produced or under what conditions. What impact does our mobile production have? The data are spheroic: s*emi-slavery, child exploitation, thousands of rapes and more than 5 million deaths*, as reported by various NGOs, such as the International Committee of Rescue and Oxfam Intermón.

## 1. From mine to our hands: extraction.

Our 'smartphone' journey begins in the mines of the Congo, a country with 80% of the world's **COLTAN** reserves (which consist of the junction of 2 minerals: **COL**UMBITE and **TAN**TALUM) and other minerals, known as 'blood minerals', and are essential for computers, tablets, playstations and smartphones – in addition to bombs or medical devices. There are no mobile phones without Congo!

Coltan is a scarce and very precious mineral. The Democratic Republic of Congo owns 80% of the world's reserves of this new 'black gold'. But the extraction of this material is the cause of one of the worst armed conflicts since World War II. The mines are under the control of guerrillas who are engaged in exploiting them through a constant violation of human rights. Ever since starting the conflict – the war in Congo, 1998 – 5 million people have died and it is estimated that there are 100,000 rapes of women annually. With money they buy arms and perpetuate conflicts to gain control of more mines.

Both the Congolese government and the United Nations prohibit the purchase of coltan from the *'red' mines*. In other words, mines controlled by the rebels and where working conditions are not optimal. The coltan that is extracted from Congo should not reach our electronic devices. But, like everything in this life, there are traps to make illegal law. One of the traps is to pass it to Rwanda.

Rwanda is the world's largest producer of coltan but has no reserves of this mineral. So how is that possible? Simple: the Congolese coltan has arrived to Rwanda and, with money and the right contacts, it is possible to end up turning it into a clean mineral. Once there, no one will doubt where they come from.

## 2. Melting and manufacturing

After extraction, the minerals reach the foundries of Asia, where they are melted and mixed with other materials. Next and last step of this production chain pass through product making, which mostly takes place in subcontracter Asian companies, which also suffer from labour exploitation, low wages and unhealthy conditions.
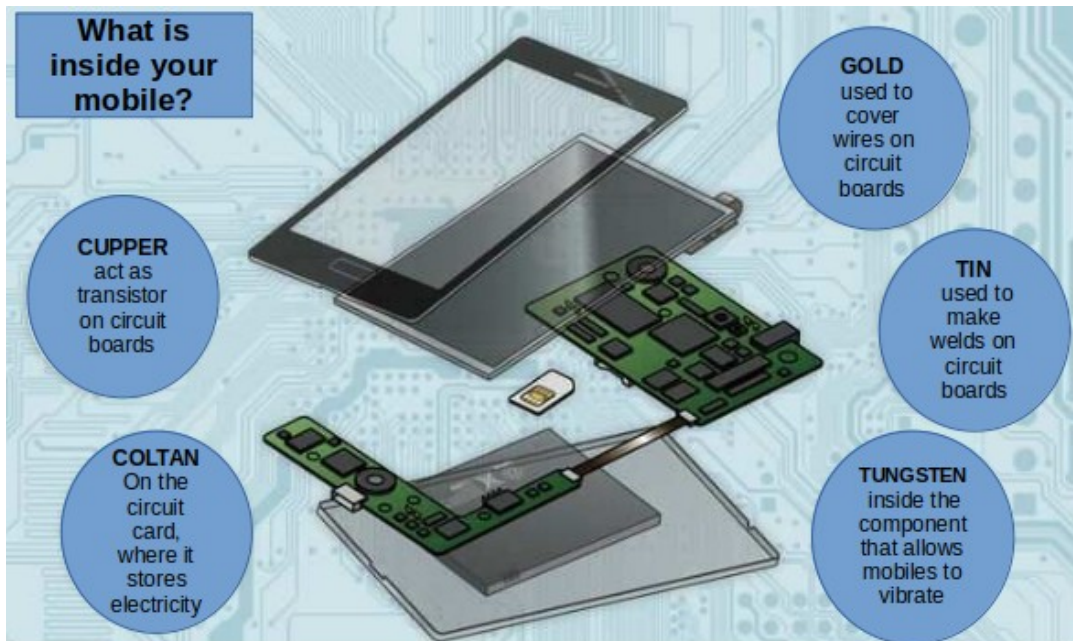


Amnesty International ensures that, through intermediary companies, the cobalt is used in products from companies such as Apple, Samsung, Microsoft, Dell, HP, Sony, Mercedes or Volkswagen.
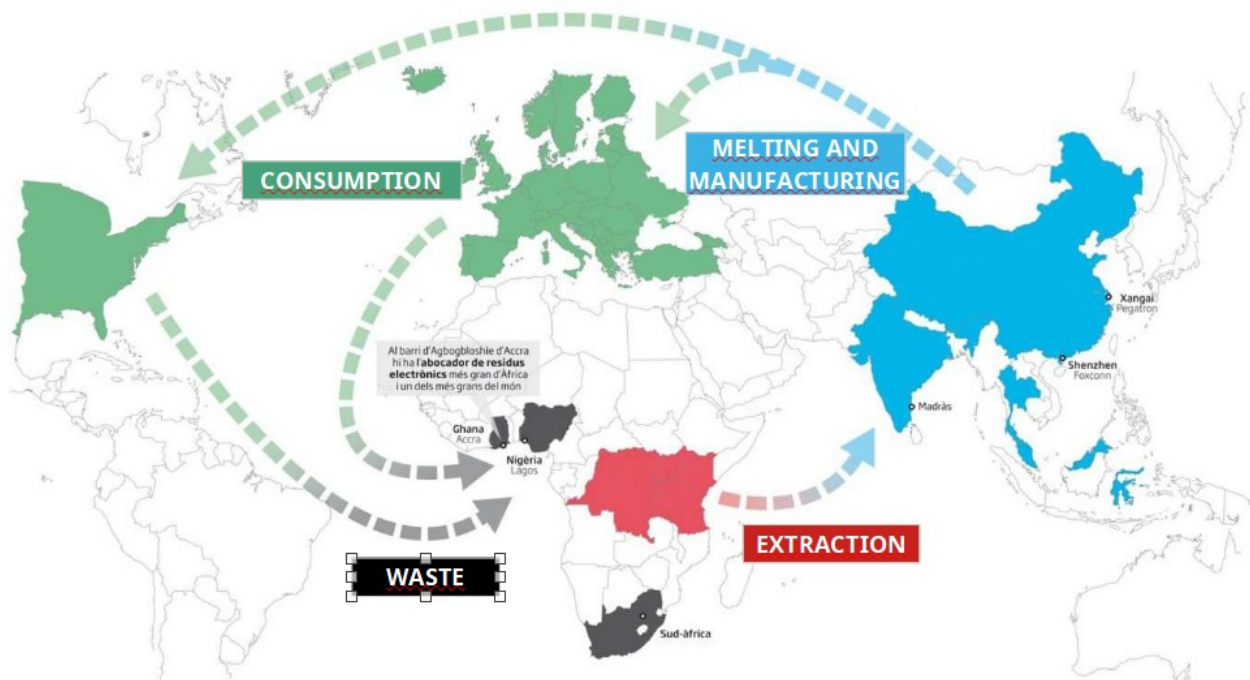
## 3. Consumption

Once it reaches our hands, it is calculated that the average life of a mobile phone in our countries is approximately one and a half years. Although it has sometimes not reached the end of its life and is repairable or reusable, many devices end up in waste and, consequently, in electronic waste dumps.

## 4. Waste

From mines in Congo to landfills in Ghana, Nigeria and other African and Asian countries. This is the path of our 'smartphones': from mineral extraction to technological waste. It is estimated that 600 containers arrive every month to the most important port of Ghana, Theme, from Europe and the United States.

## 5. What is being done to solve it?

In 2010, the United States passed the Dodd–Frank Act, which required companies to produce an annual report indicating the mineral supply chain. According to a report, the law has significantly helped to reduce the presence of armed groups in the mines in conflict.

While European homologue law is only just under discussion. But many NGOs have urged the European Union to curb the extraction of illicit trade in minerals in conflict zones.

## 6. What can we do to change it?

Recycling, selling or fixing mobiles instead of throwing them is already a way of combating production models that do not respect human rights and the global pollution. This is emphasised by NGOs such as Oxfam and Amnesty International, who appeal to these practices to deal, among other things, with the planned obsolescence – deliberate reduction in the life of a product to force its consumption to increase.

An alternative that has emerged very strongly in recent years, and which is only just developing, is the concept of modular mobiles. These are devices which, with the aim of extending the useful life of telephones and reducing global pollution, are made up of easily repairable parts and interchangeable by new ones. In this way, any user can fix their phone, a fact practically inconceivable with conventional 'smartphones'.

Companies such as Fairphone, which ensures conflict-free mobiles, and Puzzlephone are some of those oppose to the current production model: they eliminate the programmed remove obsolescence and, as a result, avoid the contamination caused by electronic waste.