Fairphone team

#NT100IS5: FAIRPHONE

Celebrating 5 years of NT100

CREATING ETHICALLY MANUFACTURED MODULAR SMARTPHONES

By Fairphone

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To celebrate five years of NT100 we've revisited Fairphone to understand what's helped the initiative grow, since it featured in our 2013 NT100.

"We are at an artisanal mine, a former concession from state company Gécamines," Bibi Bleekemolen from Fairphone tells us, in a video from a research trip to the Democratic Republic of Congo in 2011. "Behind us there are a lot of people washing copper and cobalt. There are also a lot of small kids that are washing and shovelling. When we arrived with our cameras, the children were sent away, because they don't want that to be filmed."

"We are at the quarry of Kamilombe," says Fairphone's local guide in the Congo. "This is a very deep shaft that can go 60 metres into the ground … In a mine like this, they don't come out the same day. They come out after a few days."

Few people know what goes into the making of a mobile phone. Smartphones require no fewer than 40 different metals. Cobalt is used in the batteries we charge and wear down every day. Gold is used in the circuit boards, tungsten in the mechanism that makes our phone vibrate, and copper is used for wiring.

A lot of the metals are mined in conflict areas around the Great Lakes region in Africa, home to the populations of the Democratic Republic of Congo, Kenya, Rwanda, Tanzania and Uganda. The Congo has been ravaged by civil wars since the 1990s, with over 5.4 million lives lost. Warlords regularly take over metal mines, exploiting adult and child labour to offer metals at attractive prices to international electronics companies. It's these metals that end up in the latest smartphone.

Fairphone began its life as an advocacy group in 2010, after its founder, Bas

van Abel, from the Netherlands, witnessed the mining practices first-hand and wanted to raise awareness of the hidden costs behind the estimated 2.6 billion smartphones in use today.

By 2013, van Abel and co-founders Miquel Salva and Tessa Wernink had taken the idea much further. They wanted to see if it was possible to manufacture a smartphone that was fair, focusing on four key areas: long-lasting design to reduce impact on the environment, fair materials in the supply chain, good working conditions for those manufacturing the phones, and reuse and recycling to minimise electronic waste.

The reason was simple: "Fairphone realised that you can better transform the industry if you also become a part of it," says Wernink. "You can reach and influence industry players in a different way and set examples that can inspire others." The team was set on doing the unthinkable: disrupting the giant mobile phone manufacturing industry by proving that an ethically produced smartphone is commercially viable.

The first challenge was to test market demand with pre-orders. This proved to be the easy part. "We had three weeks when we sold over 10,000 phones, we had €3.5M in the bank account and we didn't know how to make phones. And that's how we lifted off," remembers van Abel, when talking to TechCrunch this year.

The second challenge was to make a smartphone in a more ethical way than the competition, identifying the right suppliers, manufacturers and creating a design that's sustainable – more easily said than done, yet Fairphone managed it not once, but twice. Established as a B Corp in the Netherlands and relying solely on pre-orders for revenue, Fairphone released Fairphone 1 in 2013, and Fairphone 2 in 2015, retailing at £400 + VAT in the UK.

Both handsets are modular, which means that when a part breaks, it can easily be repaired or replaced. Both handsets were produced while working with initiatives that source conflict-free tin, tungsten and tantalum as well as Fairtrade gold.

In October, Greenpeace gave Fairphone the highest score of any consumer phone on the market in its 2017 Green Guide to Electronics, and iFixit gave Fairphone 2 top marks for reparability.

For every Fairphone 1 sold, the company invested $2.50 in a workers' fund at its factory in China. Fairphone 2 has two SIM cards for seamless use in more than one country, and has recently been given an upgraded camera module, which means those who want to take sharper images don't have to upgrade the whole phone.

140,000 handsets have been sold to date in the EU, with Germany being the biggest market. As of this year, consumers can buy the handset via contract offers through The Phone Co-op in the UK, Orange in France, T-Mobile in Austria and KPM in the Netherlands.

While a fixable, modular phone may seem revolutionary in itself, the real

innovation comes from the company's approach to the full life-cycle of an electronic product, from sourcing the materials, through managing labour practices, to recycling when it can no longer be used.

For instance, Fairphone has put in a significant amount of research and partnership building to become the world's first Fairtrade-licensed consumer electronics company, after a two-year pilot programme to identify, source and track Fairtrade gold. The task was previously near-impossible for other phone companies, because all gold imports to China were held and mixed up by the Shanghai Gold Exchange, making attempts to trace gold supplies futile.

Fairphone got round the problem by partnering with a Fairtrade-certified gold mine in Peru, processing the gold in a refinery in Switzerland, and then shipping it to a Chinese gold salt supplier in Hong Kong, where it is mixed with other Chinese gold. While the consumer still can't identify 100% of the gold used to make their Fairphone, they can be certain that Fairtrade-certified gold mined in Peru is definitely in the product.

This also provides a positive example that other electronics companies can emulate. Another Fairtrade gold project is now under way in Uganda, where Fairphone is working closely with the Dutch government, which has established a covenant so other industry players can join – to date Philips has confirmed that they will use Fairtrade gold from Uganda in their products.

Similarly, Fairphone has worked closely with their Fairphone 1 manufacturer Guohong in China, not only to deliver $2.50 from every Fairphone sold to the workforce, but also to work directly with employees to establish a Workers' Council that could vote on how the funds would be spent. The council decided to award employees two bonuses worth about a quarter of the average monthly salary each.

When it comes to recycling, Fairphone has partnered with Closing the Loop and Recell Ghana to collect three tons of waste phones in Ghana that were recycled at efficient facilities in Belgium, yielding 279 kg of copper and 2.68 kg of silver. The company also runs a free recycling programme for Fairphone owners, and sells its own refurbished phones back to its customers.

Fairphone doesn't always get it right. Although the company aimed to make Fairphone 1 last for five years, the manufacturer it was relying on to produce spare parts went out of business and Fairphone was forced to stop supporting the handset less than four years in. The company has learned from the episode and has since invested heavily in its own design for parts.

Nor is Fairphone actually 'fair', merely taking baby steps to getting that way. "Fairphone isn't 100% fair, it's not even 10% fair," says Fairphone spokesperson Fabian Huhne. "The goal is to be as fair as possible."

The company certainly does a great job of documenting their learnings and mistakes as they go along, in the process educating their community, and the public at large, about how smartphones are made, and the impact of making them a certain way. "If you become more transparent and if you involve your consumers and show them what is behind that product instead of rallying

against you, they're actually very supportive," continues Huhne.

The mobile phone industry, Fairphone's proposition included, is full of paradoxes that mean the company's work is unlikely to be done any time soon. For example, Fairphone is careful not to simply source conflict metals from non-conflict regions, like Australia, so as not to remove a source of livelihood for the local populations, instead working in conflict regions to find suppliers with good labour practices.

And while keeping production in Europe would reduce the environmental cost of moving supplies from Africa to China, and then product from China to Europe, the company needs to use Asian manufacturers already set up to effectively enter the market.

For now, Fairphone has no plans to produce any additional models or upgrades, focusing instead on scaling its operations in Europe and, says Van Abel, "increas[ing] our leverage with electronics suppliers to negotiate a healthier, more future-proof supply chain, [in line] with our ambitions to raise the bar in the electronics industry."

So far, industry changes have been incremental, but moving in the right direction. Google started, then dropped, its modular phone Ara, though Huhne points out the focus was more on customisation rather than sustainability. Finland-based PuzzlePhone is currently on hold due to lack of funds, while Essential Phone, a stripped down smartphone created by Android co-founder Andy Rubin, has launched this summer.

How will Fairphone adapt to competition? "We don't see that as competition at all," says Huhne. "If a bigger manufacturer decided to have a transparent supply chain with better working conditions and a repairable phone, that's the ultimate goal."

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