Cost Breakdown of the First Fairphone

At Fairphone, we want to start a movement to change the way products are made. But just as importantly, we want to make a change through the way we do business. That means being open and transparent about what we do and where we expect our money (and yours) will go. So, here's what happens to the €325 for every Fairphone sold.

Interventions € 22

Fairphone puts social values first in our decision-making process, which affects the entire production of this phone. We also actively seek ways to drive sustainable change in the supply chain and life cycle of our smartphone. We call these our "interventions". Our interventions follow the action areas of our long-term road map to a fairer economy, from sourcing conflict-free minerals from DR Congo to facilitating better e-waste solutions.

PRECIOUS MATERIALS

€ 3.75 Stakeholder meetings, participation Conflict-Free Tin Initiative (CFTI) and Solutions for Hope, and monitoring initiatives for responsible sourcing

MADE WITH CARE

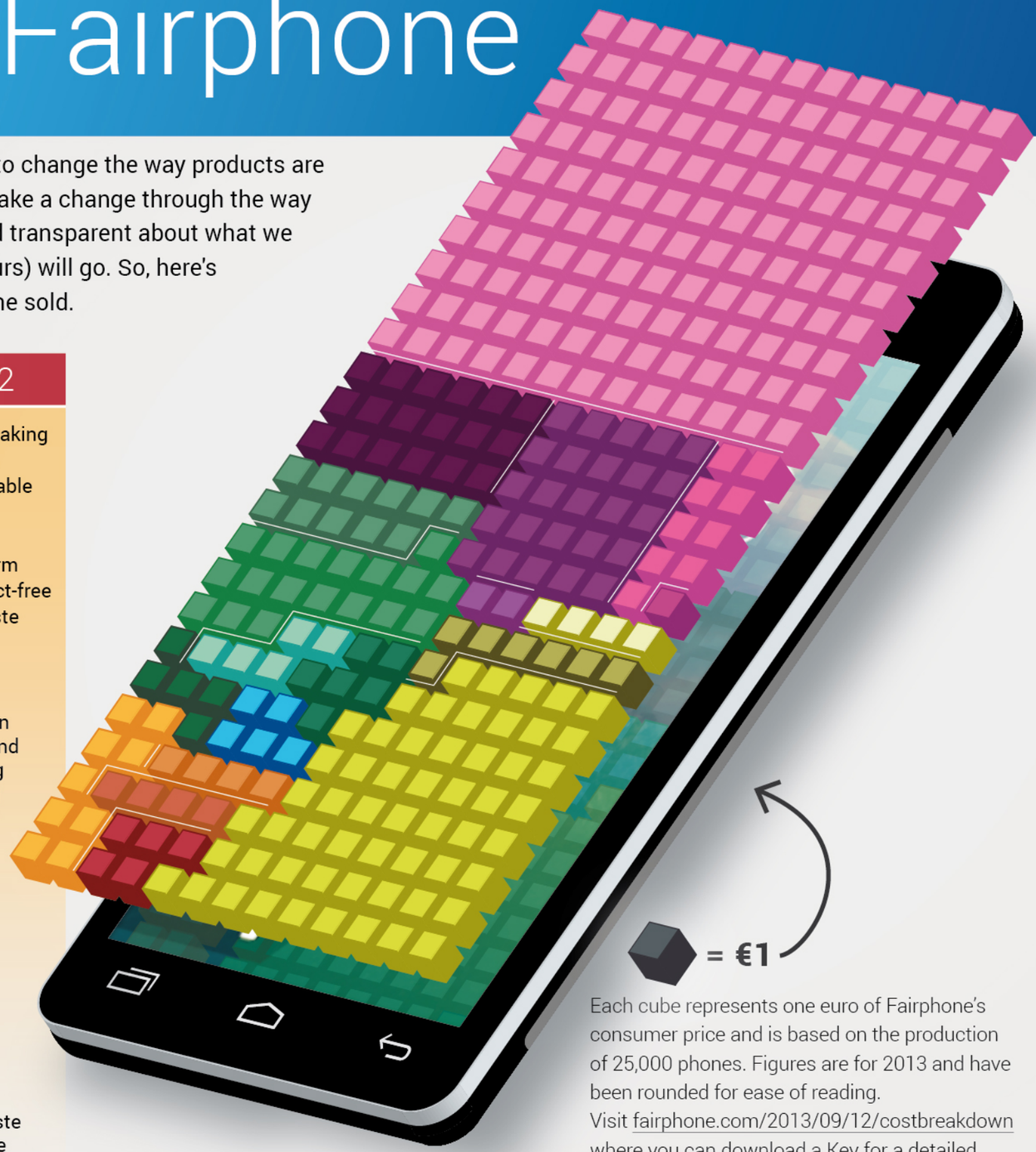
€ 7.50 Made with Care Program
€ 1.93 Worker welfare fund ($2.50)

SMART DESIGN

€ 4 Open source development, community support, Fairphone operating system

LASTING VALUE

€ 3 Initiatives to recycle existing e-waste
€ 2 Coordination for Fairphone e-waste



Each cube represents one euro of Fairphone's consumer price and is based on the production of 25,000 phones. Figures are for 2013 and have been rounded for ease of reading.
Visit fairphone.com/2013/09/12/costbreakdown where you can download a Key for a detailed explanation.

Consumer price €325

Average Value Added Tax	- € 56.50
Levies/tax (private copying , WEEE)	- € 6.75
Resellers' margin	- € 4.25

Average Sales Price € 257.50

Product € 185

€ 129.75	Design, engineering, components, manufacturing and assembly costs
€ 9	Certifications (eg. CE, GCF, RoHS, FCC, REACH) and testing
€ 1	Packaging and (repair) manuals
€ 2	Inbound logistics
€ 25	Royalties to patent holders, IP licenses
€ 18.25	Estimated warranty costs (including spare parts, labor and transport)

Operations € 45

€ 4.75	Project development, prototyping
€ 17.75	Personnel costs, office space, IT, travel
€ 11.25	Legal, accounting, other outside service providers
€ 6	Events, communications and public engagement
€ 5.25	Webshop hosting, payment facilities, customer support

Initial Operating Result € 5

€ 5	Reserve (for unexpected stuff), investments and financing costs

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The Cost Breakdown of the First Fairphone: KEY

- Pricing
- Operations
- Product
- Interventions

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FAIRPHONE

Pricing

Average consumer price
This is what you paid for your phone.

Average Value Added Tax (VAT)
This is the VAT that is due on the sale of the phone, and is paid to the relevant local authorities. As there are about as many VAT rates as there are countries to which we sell to, we took an average figure of 21% which is representative of most countries.

Levies/tax (private copying, WEEE)
A private copying levy is a government-mandated scheme in which a special tax or levy (additional to any general sales tax) is charged on purchases of recordable media. Such taxes are in place in various countries and the income is typically allocated to the developers or creators of "content", ie. music, videos etc. (source Wikipedia).

Waste Electrical and Electronic Equipment Directive (WEEE Directive) is a European Community directive. The WEEE Directive sets collection, recycling and recovery targets for all types of electrical goods, with a minimum rate of 4 kilograms per head of population every year recovered for recycling since 2009.

Resellers' margin
For phones sold through our reseller partners (e.g. the mobile network operators we are working with), we offer reduced wholesale prices so that they can cover their normal operating expenses, and hopefully make a profit while still offering end-consumers deals similar to the phones sold via our online shop. We have not yet finalized agreements, but we have factored in our expectations for wholesale pricing, and then spread the reduction across all produced phones.

Average sales price
So, effectively what happens is that we see a lower average price per phone and therefore less revenue (turnover) for Fairphone.

Product

Design, engineering, components, manufacturing and assembly costs
This is the price we pay for each phone to get them produced. This is an all-inclusive price, which includes the design work, engineering, all the components, manufacturing, assembly, testing, project management and supply chain management. It also includes development of some of the software work, including the low-level development, integration and basic Android build.

As we're working with Changhong on a very outsourced model (i.e. they handle a lot of the work), it makes sense to have a fully blended price per phone for the initial production. However, this way we do not have a detailed breakdown, for example how much is the labor cost for the actual production. We are currently discussing with Changhong the possibility of publishing the Bill of Materials (BoM) for the phone, so those of you who fancy calculating the components costs would be able to do so. As we are currently not buying components from suppliers (although we are already engaging with some) we do not have access to actual pricing information, and besides, Changhong is probably getting a better deal than we can right now with the volumes that they are buying on their own.

Regarding the wages for the factory workers we're in the process of conducting a living wage study on the wages in the area where the Changhong production facility is located (Chongqing). Fairphone wants to make sure that the factory workers are paid living wages (not minimum wage) for the production of the Fairphone. These efforts are part of our Made With Care Program (see Interventions).

Certifications and testing
We're the first company to launch a phone engineered and produced by Changhong in the European market, and that means a lot of extra work. Together with Changhong we're working hard to get all the certifications and requirements ready for our markets. This involves a lot of testing, engineering, documentation, checks and legal work to ensure that we cover everything needed to bring a smartphone to market in Europe. Below you will find a short overview of the certifications we are currently working on.

CE, FCC
To ensure that the devices are safe for use - that they will not interfere with communication networks or other electronic equipment and will meet the basic requirements to operate on public networks - they need to go through CE certification and comply with the relevant directives. Those are umbrella regulations that cover a lot of standards that the devices need to comply with before being allowed to be imported or sold within Europe.

We will also get FCC certification, for operation in the US. This certification is also the basis for approval in many other countries. Although we do not intend to sell this year's device in the US, many operators and operator groups request the FCC certification as part of general quality assessment of the device.
Each of those testing programs take about a month to complete.

GCF
Whereas the CE and FCC certifications (or so-called "type approvals") ensure that the devices will behave properly and will be safe for use, the GCF (Global Certification Forum) ensures that phones will meet the performance required by the mobile network operators. This is basically a series of tests to ensure that the devices' radio performance is adequate for good network operation, that the software running on the modem meets the protocols' specifications ("conformance testing") and also real-life performance testing in actual networks, in different conditions and scenarios (e.g. vehicular, pedestrian): the field tests. The complete process runs over a two-month period.

Bluetooth
The certification for the Bluetooth for proper performance and implementation is required to license the technology. The process takes about four weeks to complete.

RoHS
This is the European Directive for the Reduction of Harmful Substances, whereby products that we introduce to markets must not include certain chemical substances in specific concentration. The process to ensure that we will not have any of those restricted chemicals involves a thorough due diligence of all components that go in the manufacturing of the Fairphone and also physical and chemical analysis. The whole process takes at least two weeks.

REACH
This is another European Directive, for the further reduction of a much broader range of chemicals. Process is similar to RoHS and takes at least another two weeks.

Packaging and (repair) manuals
Around the office, we're calling it "the opening up experience": that exciting moment you get the phone delivered to your doorstep, and you can finally press the the second you press the "On" button. Tessa and Joe from Communications and Miquel in product strategy, work with our designer to figure out a great interaction when you first get your Fairphone. That means a small and efficient box, designs on the box to show how far this device has travelled on its journey to you, and a detailed yet to-the-point User Guide as you first play around with the phone. In addition, we are preparing DIY repair manuals, and documents for assistance if your phone needs small repairs.

Inbound distribution and insurance
These are the cost involved in getting the phones from China to our logistics center in the Netherlands and includes reception costs like handling, administration and insurance.

Royalties to patent holders, IP licenses
A lot of technologies used in the Fairphone (and any other smartphone) are actually patented by many different companies. Since there's no way for example to build a phone without using WLAN or 2G/3G technology, we need to get licenses to be able to bring those to market without infringing on the patent holders' intellectual property.

Companies holding these essential patents on technologies used in making smartphones must make it possible for non-patent holders to develop their own products based on these technologies. To do so, they must allow the non-patent holders to license the patents in a fair, reasonable and non-discrimatory way. So we will get licenses from patent holders and pay them royalties for using technology that they have basically developed. Depending on components (both software or hardware) that we use to build the phone we might have to pay additional licenses as well. We're still finalizing these.

Warranty costs
Fairphone offers a two-year warranty period on its product. We've made an estimation of the warranty costs based on a thorough research on the failure rate of several existing similar phone models over a period of two years. This includes the cost of spare parts, labor and logistics.

Excluded are the repairs of phones damaged in accidents (e.g. a broken screen due to falls). These repairs are not covered by the warranty.

Operations

Product development, prototyping
Although we're working on a licensed model for the design and production of the first phone we've invested time and incurred a lot of expenses in the last three years to make this first Fairphone possible. A part of these costs have been added as part of the development process.

For certification and testing we've produced 70 prototypes. Some of these will be destroyed during testing, which will involve inhumane treatment of mobile phones!

Personnel costs, office space, IT, travel
We spend quite a lot on travel, as we try to be closely involved in all sourcing and production activities. Mulan, Fairphone Project Manager, actually moved to China from New York to be closely involved in the production and our Made With Care Program. Our current conditions of employment are based on similar conditions to the Waag Society, from which the project originated and, as we can say, entail good conditions. Fairphone staff can, for example, buy a bike to go back and forth to the office (yes, that is normal in Amsterdam) have 25 holidays per year, receive 8% holiday pay and have a pension plan.

Legal, accounting and other outside service providers
International business means many different laws, jurisdictions and rules. We're dealing with complex issues and large transactions (involving your money) and we want to make sure we've got everything covered. Moreover, it means communicating in several languages and bridging many cultures, so part of these costs involve translations and local consultants.

Events, communication and public engagement
This category includes the materials we use to support the communication with our community, the media and partners. It includes building, managing and upkeep of our website, blog, our social media channels and press materials. Creating promotional material, like our film, flyers and t-shirts. We have the lucky position of having an active and engaged community and on top of that received a lot of (free) publicity, making our investments on marketing/communications a relatively small expense. So thank you! Seriously, we wouldn't have gained such momentum without our community engagement and the publicity we've received.

Webshop hosting, payment facilities, customer support
Yes, there are real people answering your tickets and questions! We are still working on our German language skills, but we're hopefully getting better at it. Behind the scenes, there are also quite a few people making sure that the servers keep running, online transactions go as smoothly as possible and we are up-to-date with the payment services. Some of the payment providers offered in our webshop charge us a (small) fixed fee on the transaction. This is also included here.

INITIAL OPERATING RESULT

Reserve (for unexpected stuff), investments and financing costs
We have made reservations for unexpected costs. This reserve has been made to cover currently unforeseen costs that we might encounter or are difficult to quantify right now. Once certainty has been achieved, the reserve will be released and directed to investments in future projects and product (ie. design of next devices and research to enable the next short and long term interventions to drive sustainable change in the supply chain) and financing costs (loans). Our current expectation is that we will break even this year.

Interventions

At Fairphone, we put social values first throughout our full decision-making process in making a smartphone. But we also actively seek ways to make positive changes in the supply chain and life cycle of our smartphone. We call these our “interventions”. The interventions are structured according to our action area road map and prioritized by research and extensively engaging our community members. Making a phone is our means to achieve a fair economy. With research and global dialogue, we want to positively influence working conditions, international legislation, business practices and consumer behavior.

CLEAR DEALS

Clear Deals refers to the transparency we attempt to create in our business operations, production, communication and financial overview. Publishing the cost breakdown, doing research, and assessing suppliers take time and resources, but because we feel that it is an intrinsic part of being a social enterprise we haven’t divided these costs into separate interventions or “Clear Deals.”

PRECIOUS MATERIALS

Stakeholder meetings, participation Conflict-Free Tin Initiative (CFTI) and Solutions for Hope, and monitoring initiatives for re-sponsible sourcing

We integrate responsibly sourced minerals and metals into the supply chain of Fairphone by partnering with existing initiatives and introducing alternatives and solutions. Together with the Conflict-Free-Tin Initiative (CFTI) and the Solutions for Hope Network, we have started with the inclusion of conflict-free tin and tantalum from the Democratic Republic of Congo (DRC) into the first Fairphone. In addition, the Fairphone Foundation has set up a research structure to be able to integrate more responsibly sourced materials in future Fairphone versions. Currently, we are looking for ways to add gold, copper and cobalt to the next Fairphone and there is a pilot project planned to increase transparency in the copper and cobalt mines for mine workers in the Katanga province in the DRC. By introducing ‘spectroscopy’ techniques miners can clearly estimate the value of their minerals which empowers them in the face of middlemen.

Made with Care Program

We want our smartphone to be made responsibly, by and for those people actually making the phone. We start at the factory level and ultimately want to cover working conditions at all (sub-)suppliers. For the first Fairphone, we have initiated a worker welfare program which includes (factory and living wage) assessments, factory improvements, capacity building/training and assessment follow-ups.

In addition, we pay a premium on every phone produced that goes into a worker welfare fund for the benefit of the factory workers at Changhong. This premium is matched by Changhong and we are working together with experienced people on a set-up to ensure that the premiums are distributed fairly across the factory and not only those workers who produced our phone.

SMART DESIGN

Open source development, community support, Fairphone operating system

We will work towards making the Fairphone a development platform available for third-party developers. To make sure this happens, we need to invest in making sure that the proper licensing deals and structures are in place to make available the necessary documentation, libraries, source code and tools. This involves covering a lot of legal aspects. We will not actively develop alternative operating systems ourselves,. But once the necessary development environment can be released for third party development, we will support the developer communities to make alternative operating systems like Ubuntu and Firefox OS compatible with the Fairphone.

On top of the stock Android release, Fairphone is developing its own Android-based operating system in collaboration with social enterprise Kwamecorp. Kwamecorp's view is that "with the fragmentation of Android, we are seeing mobile operating system interfaces are treated like shop fronts and their users as customers. As such the OS is being engineered to control the user rather than provide the user with control. With the Fairphone OS we want to balance this relationship. We want the user to waste less time getting to what is important, strip the OS to its essence and focus on empowerment rather than bloatware or a notification-driven environment. We aim to have all Fairphone OS code released in the future to allow everyone to build upon it."

LASTING VALUE

Initiatives to recycle existing e-waste

For every Fairphone sold, €3 is reserved for setting up projects in countries where safe electronic waste (e-waste) recycling is not yet facilitated. The aim of these projects is to process existing e-waste in a safe and sustainable manner while also investing in local infrastructure and training.

Coordination for Fairphone e-waste

We don't only focus on the design, production and marketing of the Fairphone: we actively seek to address the end-of-life of the Fairphone and reduce global e-waste. This means making sure that your Fairphone (and its individual components) can be delivered, used, re-used and disposed of properly.

We set up partnerships to coordinate the end-of-life of Fairphones. Every Fairphone gets a unique tracking code, so we can increase our ability to regulate the flow of its usage. This way, we can prevent the devices from ultimately ending up in landfills where they can be extremely harmful to the people and the environment.

In addition to these activities, we offer a take-back opportunity for all the mobile phones already "out there" in the system (in a drawer somewhere), to make sure people can hand them in so that they can be re-used or recycled easily.