

Manufacturing processes driving smartphone prices down

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The low end just got a bit more high end. Credit: Ikhlasul Amal, CC BY-NC

A change is taking place in the mobile phone market that has the potential to bring more power to the consumer. Cheaper devices are becoming an option and while they're not quite ready yet, they could revolutionise the marketplace. It's up to you if you want to be an early adopter but soon enough, you may find yourself pocketing one of these

new-breed devices.

At this year's Mobile World Congress, where the biggest players in mobile phones set out their stalls for the year ahead, most hinted that they would be producing more of the same, but in a cheaper form. Many mobile phones were announced, but the majority of them offered enhanced versions of devices that were already around. We saw better screens, faster processors, more advanced cameras but little true innovation.

The proliferation of the manufacturing processes behind mobile phone technologies has gradually driven the price down, to the point at which new ranges of contract-free smartphones are coming to the market, all in the £70 to £90 price range.

Originally intended for emerging markets where the traditional costs of smartphones had been prohibitive, these devices are now appearing in developed markets.

The rise of this new breed of affordable, functional smartphone will have dire consequences for carriers and manufacturers selling in the mid range.

Teething trouble

Two new devices encapsulate this shift towards affordability. The [Alcatel One Touch Fierce](#) is an affordable smartphone on offer from T-Mobile and the [Motorola Moto E](#) is a device that retails at around £89 – and is probably the better of the two. They have a similar set of characteristics and are both being aimed at customers who no longer want to pay top price for a phone.

Their cheaper internal components are bulkier than those found in a

premium device, so both phones have a larger plastic case with a chunkier feel in the hand. Both only have 4GB of internal memory (about half of which is available for data and apps), but this can be increased with a microSD card, which adds to the overall cost.

Like the touch screens used in cheaper tablets, there can be problems with responsiveness and touch accuracy in these cheaper mobile phones, so check reviews carefully for user experiences before you buy. The smaller screens used in these phones typically also have a narrower viewing angle and poor contrast in direct sunshine, too. Both of these devices come with a low spec camera and lack a forward-facing camera, which reduces the opportunity for selfies.

Most of this new generation of cheaper phones run a vanilla version of Google's latest Android mobile phone operating system Kit Kat, without many built-in apps and with little [skinning](#). This is where manufacturers take the basic Android system and add extra sparkle with their own apps or services. You can expect four to five hours of battery life and reasonable call quality, although it will be worthwhile keeping the receipt in case the batch that you get your phone from has poor build quality.

It's clear that these two phones, and their ilk, are not the most desirable devices on the market at the moment, but within a year, second-generation devices at this price point will start to emerge. They will probably have the same features as those which currently cost hundreds of pounds more, without all the issues the first generation have.

Going modular

Rather than upgrade your phone or slogging it out with a first generation cheap device, an alternative is being touted. Why not buy a modular device which allows you to replace an individual component in the phone, such as the screen, the battery or camera? This is the core idea

behind Google's [Project Ara](#), which has just unveiled its first prototype.

After purchasing a base piece of hardware, currently called Endo, you buy and plug in modules with the required functionality. The battery is interchangeable, as are the separate components that make up the phone. That means you could upgrade the camera, replace your own battery or switch out a component for whatever parts developers come up with.

Google is planning to start introducing the phones in 2015, followed by more models a year later. The aim is for a life-cycle of five to six years, with costs ranging from \$50 to \$500, depending on the default configuration supplied.

The question remains as to whether a modular device is sufficiently robust. When the prototype was unveiled, it had a cracked screen from the interchange of a module on the back. Instead of letting the problem taint the product though, Google argued that it perfectly illustrated why people need modular phones. If your screen cracks, you simply get a new module to replace it, rather than going through the arduous process of having your expensive handset repaired.

Beyond this, Google will have to engineer a change in customer behaviour to sell these gadgets. Most consumers are happy to trade in their phones over 18 to 24 month life cycles, particularly as they get dropped, damaged and scratched. The argument for replacing a component in the device somewhat disappears if a new phone can be bought for £20 to £60.

New direction

The competition for revenue in the [mobile phone](#) market has never been so fierce and these innovations are set to change the course that we've been on for years. Cheaper, contract-free phones reduce the add-on

income that carriers have been able to secure by getting customers to upgrade and lock them in to long contracts.

Apple may be relatively insulated from the trend for cheaper devices but others may not be. The iPhone maker can carry on innovating at the top end, introducing lighter, thinner phones coupled with across-the-board services such as its forthcoming music streaming service. These are attractive to those already inside the Apple ecosystem and should remain so.

It is the mid-level manufacturers, such as Samsung, HTC and Motorola, that are most under threat. Year on year, they will see their margins decrease as the features that were once only available in mid-range devices begin to appear on phones at the lower end of the market.

The fact that most of the mid-range phones available today operate on Android makes it significantly easier for a user to swap around. That would suggest that the only company able to continue making money in the new mobile [phone](#) era would be those in the software business. In this case, that's Google.

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