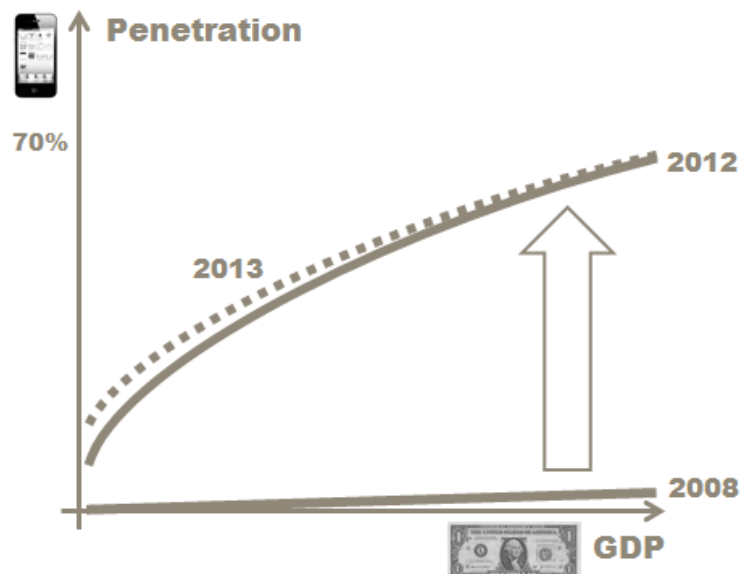


Public industry analysis #11 2013

Lower your price points – or stagnate

Why the smartphone growth is over (for smartphones as we got to know them)



An amazing growth story comes to an end: Smartphone penetration isn't really growing any longer in mature markets. Smartphones are still sold in high volumes, but the difference is that they're now primarily sold - subsidised or not - to existing smartphone owners, who upgrades.

In 2007, there was an untapped demand for smartphones. With penetration rates approaching 70%, this demand is now fulfilled.

Also maturing markets show signs of saturation – at penetration levels less than 20% – since income level is proven to be the primary factor behind smartphone penetration.

The need for the 30 USD smartphone crystallises from this analysis. But operators must also upgrade networks for mobile data – and make mobile data hassle-free also for prepaid customers.

In mature markets, smartphones go to smartphone owners

The growth is over in mature markets: though the number of subscriptions tends to grow 3-6% a year, it is mainly due to customers taking up a second (or a third, fourth, fifth...) SIM to go into yet a supplementary device, most typically a tablet. The SIM growth is seldom sufficient to compensate for the continuous price erosion on services, leaving most operators with a **decline in total service revenue**.

Some mature market operators do report top line growth, though. In nine out of ten cases, this can be explained by **growing equipment revenue** – dominated by smartphone sales. As described in [Why operators should refrain from handset sales](#), the growing share of revenue from equipment is problematic though: Margin is diluted – even when handsets aren't subsidised.

In this situation, it is critical for operators to retain existing customers before trying to recruit new. As described in [SRC increases to 98% of SAC – do the positive effects continue after 100%?](#), **subscriber retention cost is increasing** – led by operators in the most difficult and competitive mature markets.

In practice, "subscriber retention" means giving the recommitting customer a new smartphone – or at least a heavy discount on it. Consequently, it is an operator's *existing* customer base that today dominates smartphone sales.

Let's look at some operators reporting how much of their equipment sales go to existing customers:

Operator	Definition	2013 ¹
Docomo, Japan	Share of <i>handsets</i> sold to existing customers	69%
Softbank, Japan	Share of <i>handsets</i> sold to <i>upgrading</i> customers	41%
Verizon, US	Share of <i>smartphones</i> sold to existing customers	72%
AT&T, US	Share of <i>handsets</i> sold to existing customers	71%
Sprint, US	Share of <i>iPhones</i> sold to existing customers	58%
Rogers, Canada	Share of <i>smartphones</i> sold to existing customers	65%

Table 1. Share of equipment sales to existing customers (=retention)

Even though most operators don't report the number of handsets sold (even less so to whom they went), we can, based on Table 1, guess that about **65% of handset sales in mature markets is about retention of existing customers**. With high certainty, these customers were smartphone users already.

This means that even though smartphone sales volumes can still be high, the effect on smartphone *penetration* is limited.

¹ Japanese operators: 3 month period April-June 2013. All other operators: 6 month period January-June 2013.

In maturing markets, smartphone penetration increases – but for how long?

Shouldn't maturing markets (India, China, Brazil, Indonesia, Mexico etc.) see the same development in smartphone penetration as mature market has had – just offset a few years?

Not necessarily. High smartphone penetration requires at least the following five factors:

	Mature markets	Maturing markets
Need	(✓) Good access to fixed internet; high PC ownership	✓ Fixed internet not always available; PC ownership low
Demand	✓ Internet and mobility part of everyday life	(✓) Less experience with fixed internet means less understanding of what internet can be used for
Income level and affordability	✓ Though expensive, prioritised (and subsidisation helps)	✗ Current smartphones afforded only by a small part of the total market
Network readiness	✓ 3G, increasingly going to 4G	✗ 2G dominates
Operator focus to drive smartphone penetration with e.g. subsidies	✓ If customers are credit worthy and sign contracts with long binding time	✗ Prepaid dominates; weak credit control makes subsidisation risky

Table 2. Prerequisites for high smartphone penetration

Clearly, there are key differences between mature and maturing markets.

The relationship between income level and smartphone penetration

It took mature markets about 5 years to reach up to 70% smartphone penetration, starting at zero.

Today, quite many operators regularly or occasionally report the smartphone share (of total base) in their network. Let's correlate this against the income level measured as GDP per capita; see Figure 1.

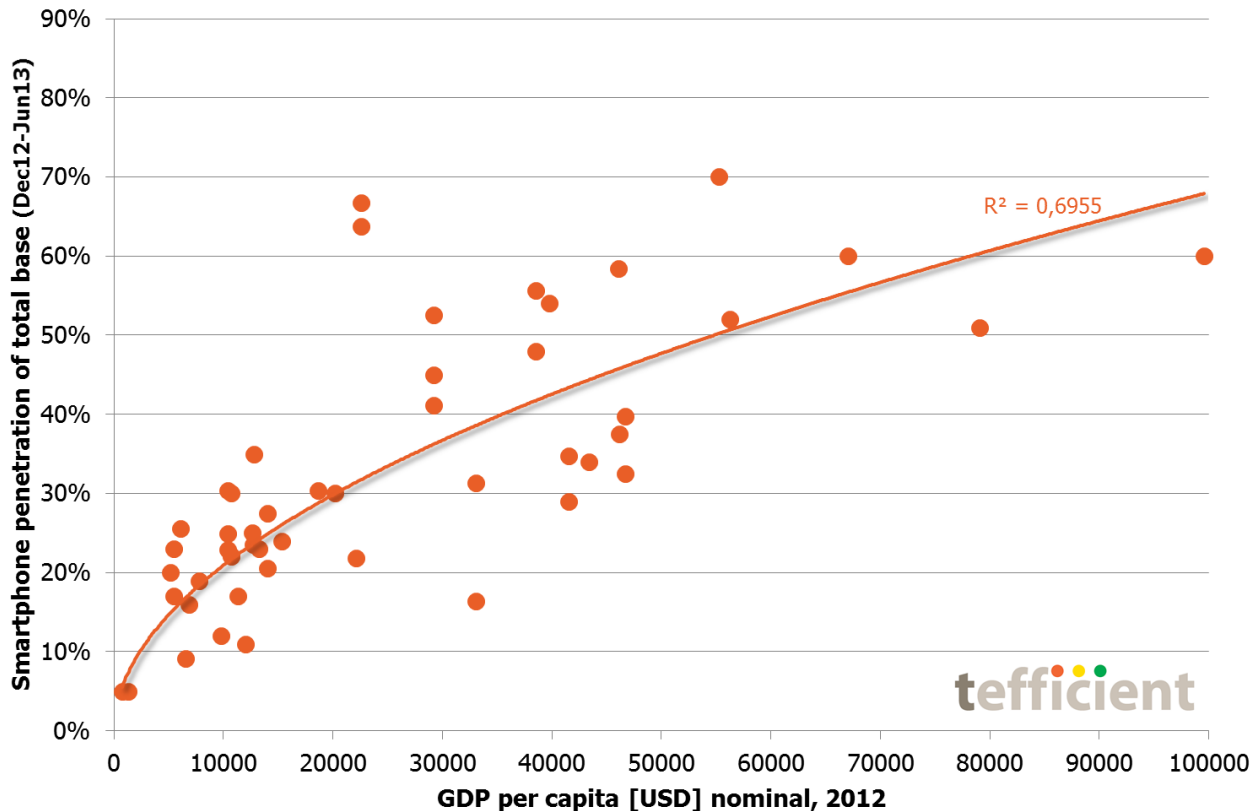


Figure 1. Operator reported smartphone penetration² vs. GDP per capita of the country

First note the high R-squared value (0,70) which means that the fit to the regression line is very good. There is, in other words, a **strong relation between operator reported smartphone penetration and the GDP per capita** of the country in question. A country with a GDP per capita of 10000 USD (world average, but also the position of countries like Mexico, Malaysia and Turkey) tends to have about 20% smartphone penetration whereas a country with a GDP per capita of 40000 USD (approximate position of France, Germany and the UK) should expect about 45%.

If adding the operator names to Figure 1, readability suffers, but we can see some interesting regional differences, see Figure 2.

² Most typically for June 2013, but since smartphone penetration isn't always regularly reported, values from March 2013 and December 2012 are in the sample if no newer value exists

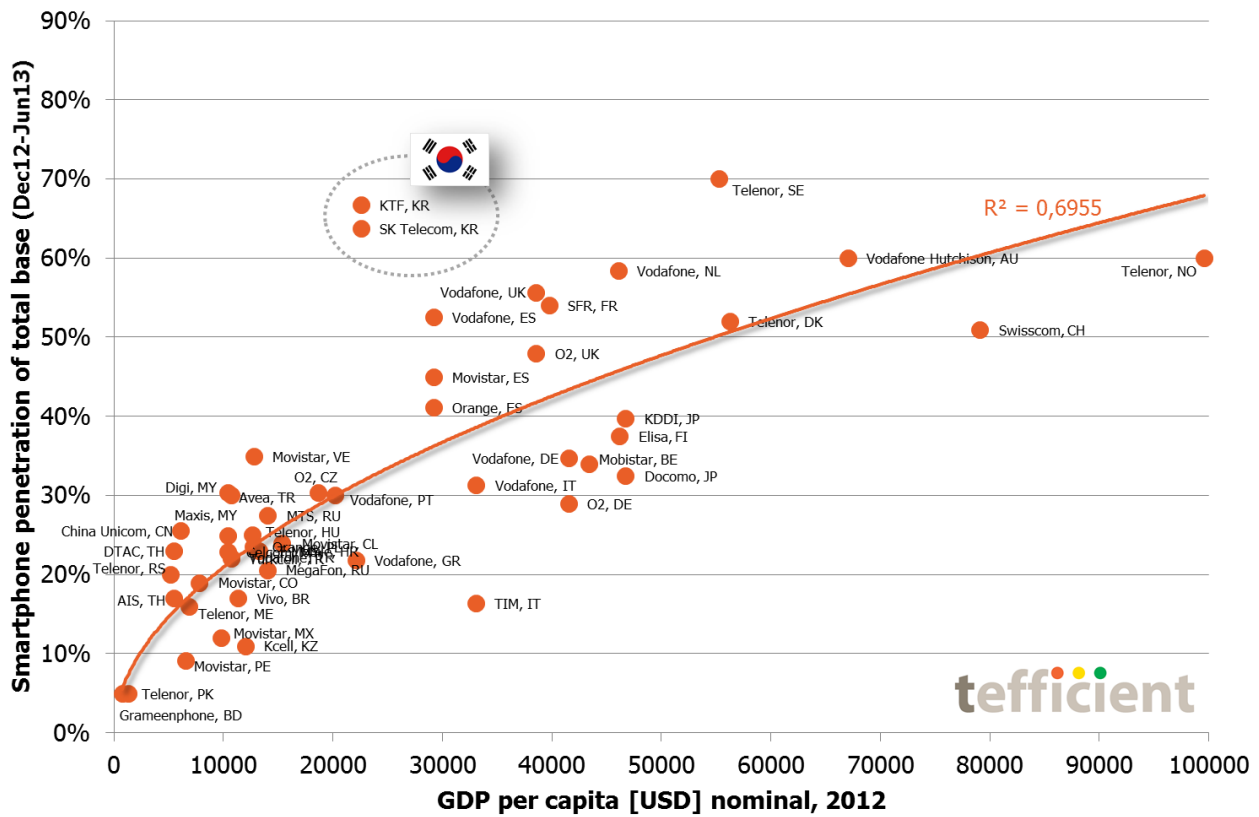


Figure 2. Operator reported smartphone penetration vs. GDP per capita of the country (with names)

There is one country that really stands out with a very high smartphone penetration in spite of a relatively low GDP per capita: **South Korea**. Being the homebase of two major smartphone manufacturers, Samsung and LG, this is perhaps logical. The Korean operator market is however also very advanced with the world's highest 4G LTE penetration and average data traffic per SIM well above the average (see [Mobile data demand saturated? Forget it.](#)). The operator market is also competitive with large amounts being used on marketing & sales.

European countries where handset subsidisation is (or until recently has been) the norm – the **Netherlands, UK, France, Spain and Sweden** – are also having higher smartphone penetration than what the GDP per capita suggests. Laggard European countries are Italy, Germany, Finland and Belgium – countries where handset subsidisation has been less frequently used. The same goes for Japan.

You might ask where the North American operators are, remembering that they tend to report very high smartphone penetration. Partly this is because they all report the smartphone penetration within their own, retail, *postpaid* base – rather than the penetration within the total base. Figure 3 shows all operators following this reporting standard, which obviously boosts the penetration compared to Figure 1 and 2, but also makes the data points incomparable to those in Figure 1 and 2.

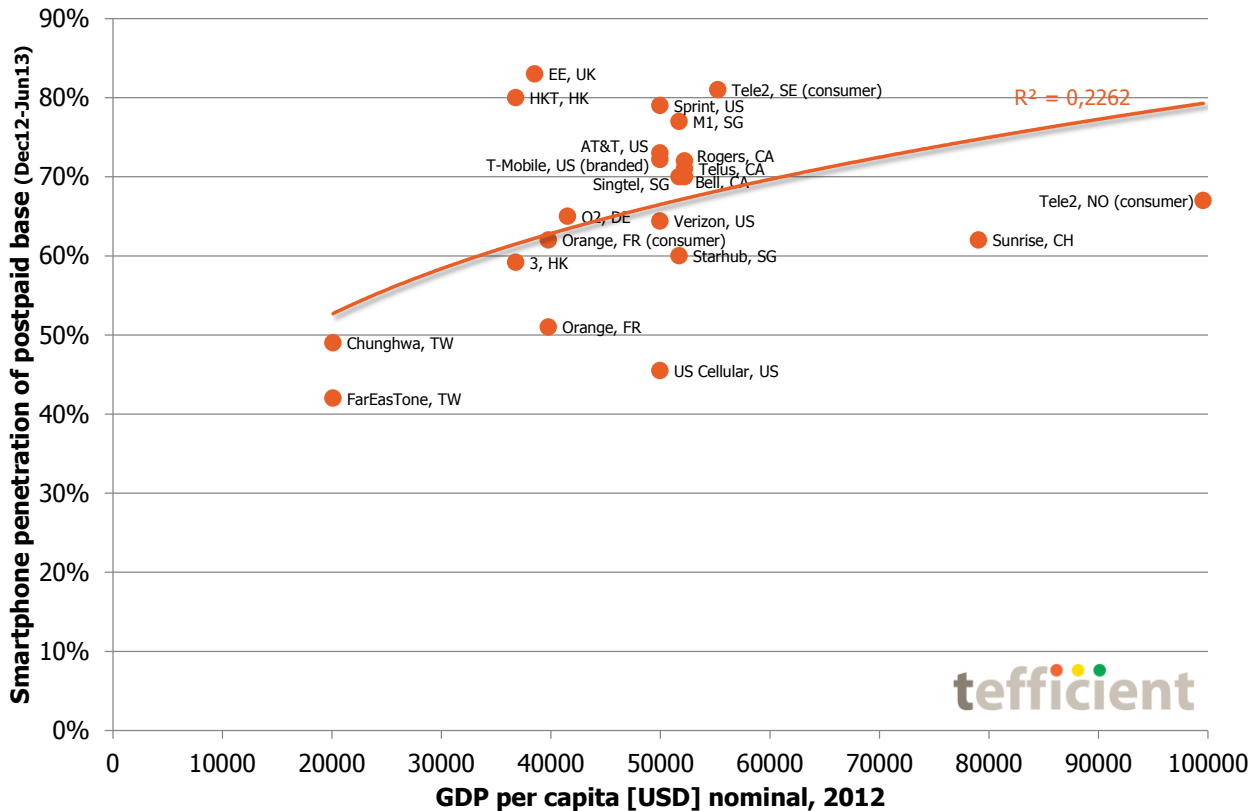


Figure 3. Operator reported smartphone penetration within postpaid base vs. GDP per capita of the country

With most of the operators reporting smartphone penetration against the postpaid base being in 40000-50000 USD GDP per capita countries, the R-squared value is now much lower. Quite a few of the operators in Figure 3 are narrowing down the postpaid definition further, only counting smartphone penetration against e.g. consumer segments which distorts the comparability further.

To check how the operators in Figure 3 would fit to the regression line in Figure 1 and 2, some estimation has to be performed. Recalculating Figure 3 for the operators, where this is possible, with the assumption that the smartphone penetration in the prepaid segment is 10% of the smartphone penetration in the postpaid segment and overlaying this onto Figure 1 gives the result shown in Figure 4.

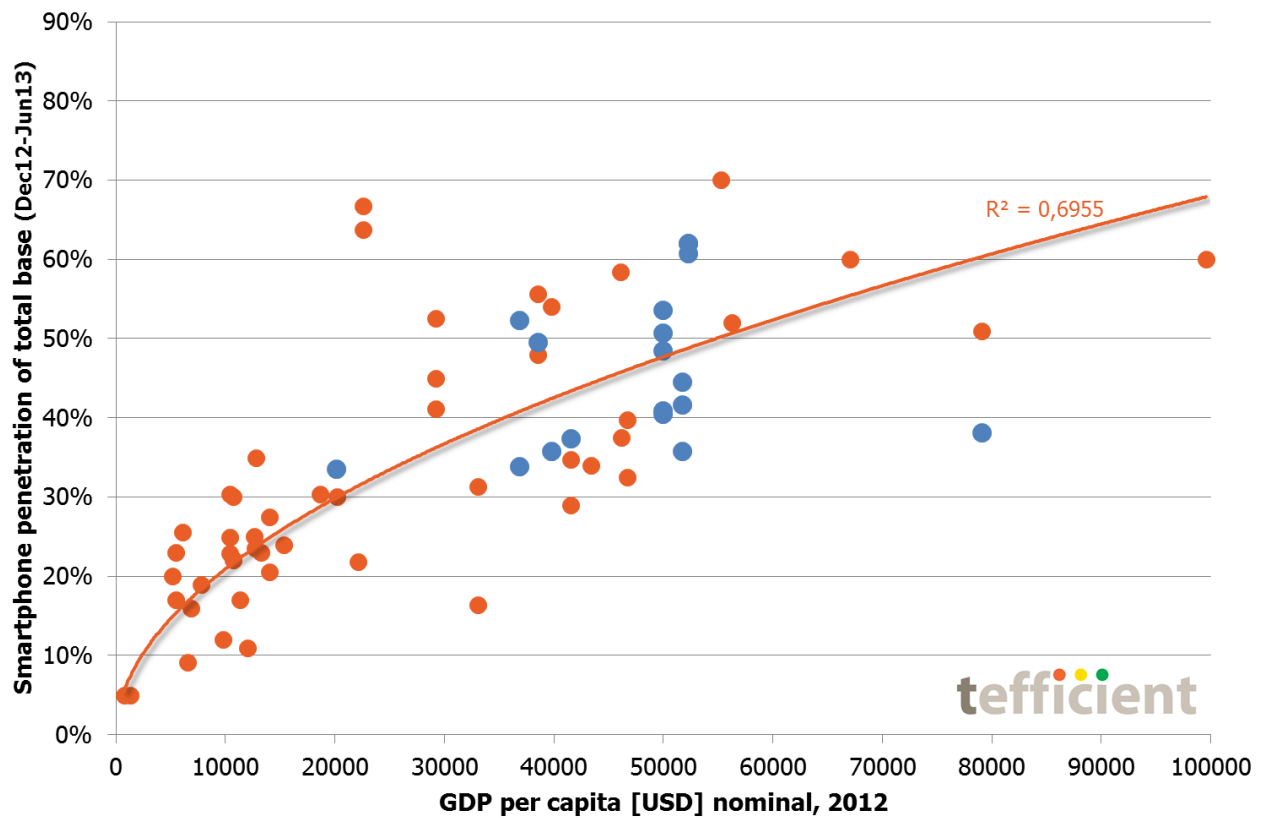


Figure 4. Most operators in Figure 3 recalculated based on estimation and overlaid on Figure 1

Figure 4 illustrates that the assumption used here seems to be valid for the majority of the operators analysed. Furthermore, the additional data points – although estimated – adds further credibility to the validity of the findings based on Figure 1 and 2.

Predictions

Mature markets

As said, the increase in smartphone penetration has stalled in mature markets now that most smartphones are sold to existing smartphone owners as part of operators' retention activity. **It took five years to build the current 50-70% smartphone penetration level and this is likely where it will end.** Wouldn't cheaper smartphones help to grow penetration one notch more? Most likely not: affordability hasn't really been an issue in mature markets – in contrast the bestselling smartphones have been the most expensive³. Cheaper smartphones might however help on operators' margin since less subsidy needs to be given.

Maturing markets

Figure 1 and 2 show that the primary factor that explains smartphone penetration is the income level. This is also why it is **unrealistic to think that maturing markets can reach the same smartphone penetration levels as mature markets.** The lack of network readiness and the low operator interest to subsidise smartphones (see Table 2) will contribute to this.

Basic mobile telephony penetration did however reach the sought 70% level in maturing markets already in 2010⁴. A key parameter to reach this has been the "**30 USD mobile phone**" – a price point which for a long time was deemed a benchmark by e.g. GSMA⁵. Most of the bestselling phone models of all times, like the Nokia 1110, fall into this price category.

The cheapest smartphones – typically Android phones with a Chinese or Indian brand and origin – are sold for about 80 USD today. Smartphones from global brands like Samsung, LG and Huawei start at 100 USD. If the average income level is low, it is easy to understand why smartphone penetration is still low when the price of the cheapest smartphone equals three regular mobile phones.

³ Like iPhone and Samsung Galaxy S4

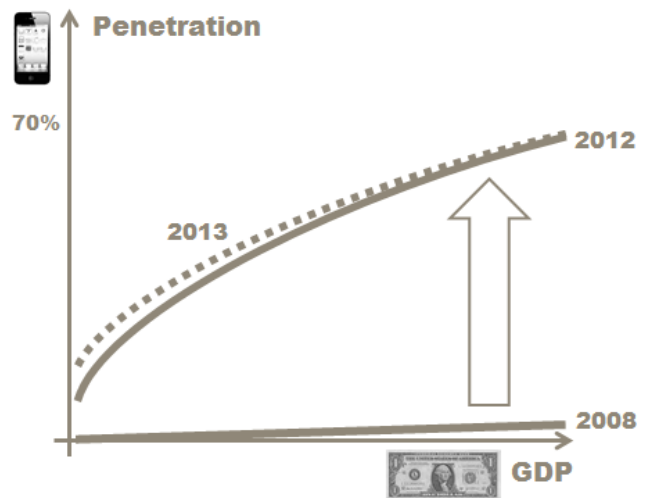
⁴ Source: ITU

⁵ See e.g. <http://www.telecompaper.com/news/motorola-to-supply-under-usd-30-handset-for-gsma-programme--489110>

Conclusion

The growth in smartphone penetration has been phenomenal, but there is only little untapped demand left – for smartphones as we know them. This goes for maturing markets as well since the primary factor behind smartphone penetration is income level.

An improved global income level will obviously ease on the affordability requirement. This development is however slow, especially during the current global economic climate. Unless the global smartphone industry should stall, **30 USD smartphones** must be made available – also from the global brands. It goes without saying that the rumoured “low cost” iPhone won’t satisfy this requirement.



At the same time, **operators in maturing markets need to upgrade their networks to support mobile data**. And with a prepaid market share of 90+%, operators need to make it **as hassle-free for prepaid customers to use mobile data** as it is for them to use voice. There is no logic in that mobile data usage in prepaid is fractional compared to postpaid when voice usage levels are comparable.

Part of the industry sees the issue: On Facebook’s initiative, Facebook, Ericsson, Samsung, Nokia, Qualcomm, MediaTek and Opera have just formed internet.org with the ambition to lower the barriers for the unconnected world to connect to the Internet.