

Bridging the digital divide in Africa

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Developing markets have a strong culture of entrepreneurship, a culture that has been boosted by the ubiquity of mobile. But for many, data remains a luxury and often agonisingly out of reach, even on mobile. In fact, 60% of people in sub-Saharan Africa will still lack a data connection in 2020. Wide accessibility to SMS has made mobile banking possible, but more sophisticated services require data provision to work, especially services which require strong security.



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There is a digital divide in Africa between those with hi-tech connections and those without. Technology is now the bringer of economic prosperity in the region. According to the GSMA, in 2015 mobile technology and services generated 6.7% of GDP in Africa, a contribution that amounted to around \$150 billion of economic value. If we take Nigeria for example, a core reason for better development in the South is connectivity and access to digital technology and services. Historically more prosperous, better connections has meant the gulf between economic growth in the two regions has widened as a result.

Engagement in areas such as banking, communication and content (things Europeans take for granted), are all dependent on mobile. Whilst mobile penetration tends to be high – access to data is not, so often the key means for people to partake in the digital economy is through SMS, which presents its own unique set of challenges in terms of cost and security.

And where there are more stable data connections, consumer behaviour is also a big factor in contributing to the digital divide. Consumer demand for data services plays a big part in driving the digital economy. While many consumers want access to a service or content, some people with smart devices are hesitant of signing up to a long-term or expensive data plan because they don't necessarily see the value that data will bring them.

If there is no online content relevant or of interest to a farmer in Ghana, they will not see the same value in being connected as a banker in the UK. In short, it's not just organisations and operators that have contributed to this divide, it's actually perpetuated by stakeholders in the mobile industry.

Reliability

Aside from having less ability to engage with the latest mobile trends, the lack of reliable data services in emerging markets has quite a severe snowball effect on more mainstream mobile applications. Rolling out services on mobile can be

expensive for organisations and if there is a smaller audience, companies will often pass these costs back to the consumer, which is clearly not an ideal solution in a low GDP region.

The result is basic services like mobile banking are often operated through SMS services – less secure than data connections but much more ubiquitous.

One way organisations are bridging this divide between the need for data and the absence of it is with a technology called Unstructured Supplementary Service Data (USSD). In essence, USSD is a protocol, built into all GSM devices, which allows network operators to communicate directly with handsets. An internet without the internet, the technology doesn't have the bandwidth to stream video, download images or work documents, but it can allow short packets of data to be securely sent and received to a device without the need for a 3G or 4G connection.

Present in all GSM connections, there are already a number of existing use cases. For example, LittleCab an Uber competitor in Nairobi and backed by Safaricom, introduced USSD to its booking system so that people can order a cab when they have no data access. The phone communicates directly with LittleCab, meaning that no third party can have access to location or payment information.

USSD in Africa

One standout thing you can spot from most current implementations of USSD in Africa is that it is being used to power simple content and service based data requirements. To drive widespread use though, we need to look to systems that provide local content, sourced from the communities themselves, whilst also delivering services to the masses in a simple cost effective way.

Consumers in this market particularly will not engage with content from a different region or translated services. While it may not be as straightforward as enabling content designed for WiFi through a fast 4G connection, through better understanding of the customer and the market, more interesting commercial models can be developed to suit consumer's needs.

Aside from the need for at least some level of connection, mobile has the potential to make a huge impact in both developed and emerging markets where data isn't readily available to all mobile users. The technology has the capacity and ability to truly bridge the data inclusion divide globally for transferring small packets of data through mobile.

Access to information will in turn present a catalyst for entrepreneurship and the development of new opportunities for economic growth. Leveraged correctly – USSD can play a vital role in addressing and reducing the data divide.

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