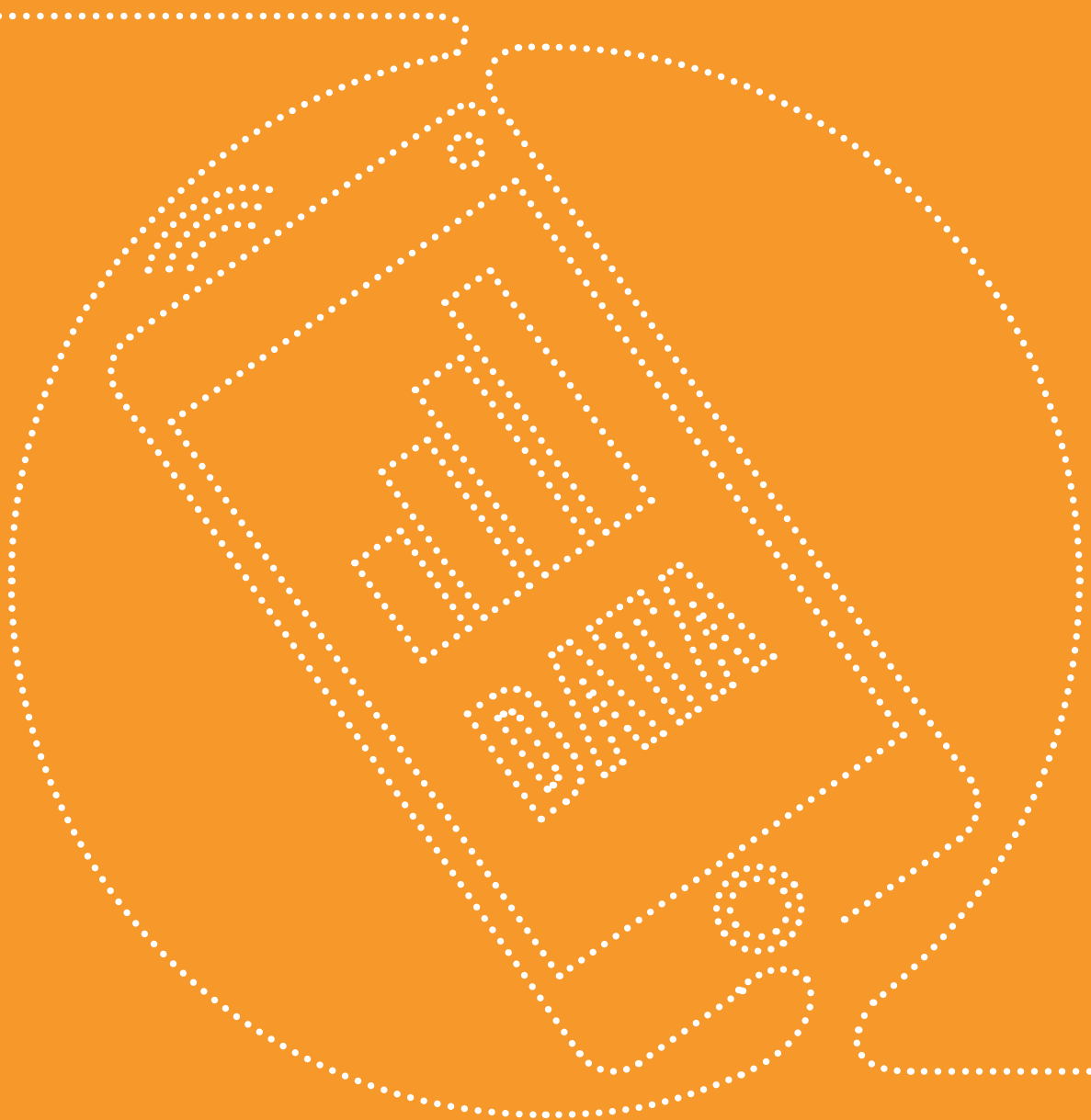


THE IMPACTS OF EMERGING MOBILE DATA  
SERVICES IN DEVELOPING COUNTRIES

NOVEMBER 2016



**RESEARCH BRIEF NO 3:**

POLICY GUIDELINES FOR AFFORDABLE MOBILE DATA SERVICES

# I. INTRODUCTION

## RESEARCH BACKGROUND

According to [data](#) published by the International Telecommunications Union in June 2016, [over half](#) the world is currently offline. The problem is acute in low- and middle-income countries — almost 75% of people in Africa and 58% in Asia and the Pacific are offline. This digital divide renders many countries less able to [leverage the benefits](#) of the Internet to achieve the United Nations' [Sustainable Development Goals](#).

For many countries in [Africa, Asia, and Latin America and the Caribbean](#), the high cost of access remains one of the most significant barriers to Internet use. As analysis from our [2015-16 Affordability Report](#) shows, this is particularly true where income and gender inequalities are significant. One approach that has emerged to address the affordability issue — specifically, the high cost of data — is the provision of alternative data service offerings that aim to enable users to connect more affordably, including those that allow the user to access specific applications or content at no charge (i.e., zero-rating).

In October 2015, the Alliance for Affordable Internet (A4AI) launched a [research project](#) to better understand the implications of these new mobile data services for affordability in eight low- and middle-income countries.<sup>1</sup> Two research briefs in this series have been previously published: the first details the [“Models of Mobile Data Services in Developing Countries”](#); the second looks at [“User Experiences and the Benefits of Mobile Data Services”](#).

This third and final brief aims to outline policy and regulatory guidelines around the provision of zero-rated and other low-cost mobile data services. These guidelines draw on the research findings of the previous two research briefs (which included a mapping of mobile data plans and a survey of 8,000 mobile users across the eight countries included in the study), as well as external research that looks beyond the questions and countries covered in our own research. In an effort to draw on local expertise to identify policies for more affordable mobile data services, we also conducted 20 semi-structured interviews with civil society organisations, mobile phone operators, academics, regulators and other government representatives in all eight countries.<sup>2</sup> The resulting guidelines were developed through a consultative process that was open to all members of A4AI.<sup>3</sup>

This is the third and final report in A4AI's series on [“The Impacts of Emerging Mobile Data Services in Developing Countries”](#). Based on empirical evidence collected through this project – and evidence presented in other research – we offer a set of policy and regulatory guidelines for mobile data services in low- and middle-income countries.

<sup>1</sup> The eight countries are Colombia, Peru, Ghana, Nigeria, Kenya, India, Philippines, and Bangladesh.

<sup>2</sup> Interviewees were selected to ensure representation across all stakeholder groups in the eight countries selected for this study. All interviews were done on the basis of anonymity.

<sup>3</sup> A4AI is a [global alliance](#) of 80 organisations from across the private, public, academic, and civil society sectors. All members were able to contribute over a 3-week period in August 2016. The final version was approved by the A4AI Advisory Council.



## 2. RESEARCH ON MOBILE DATA SERVICES AND THE IMPLICATIONS FOR AFFORDABILITY

### 2.1 USER EXPERIENCES WITH MOBILE DATA SERVICES

Our [first research brief](#) identified four main types of data services offered in the eight countries that we examined: (1) full cost; (2) service-specific; (3) earned data; and (4) zero-rated data plans. Based on this typology, we [conducted surveys](#) in each country to understand the extent to which people used these services, and their experiences doing so. Across all eight countries, approximately 50% of people surveyed used a full-cost plan as their primary means to connect. The second most-used option to connect was public WiFi (21%), followed by service-specific plans (19%), zero-rated plans (4%), and earned data plans (2%)<sup>4</sup>. These results were examined in detail in [our second research brief](#).

The results indicated that the use of zero-rated services (e.g., Free Basics by Facebook, Wikipedia Zero, zero-rated WhatsApp) was low. While only 4% of users said they used a zero-rated service as their primary means of connectivity, overall, 10% of users reported having used a zero-rated service at least once. Approximately 88% of the zero-rating users surveyed responded that they had used the Internet before using the zero-rated service. When asked what condition would be most acceptable to get “free” or zero-rated data, a majority (82%) of all users preferred to have the “free plan” valid for a short time or with a data cap, with no restriction on the websites and applications accessible.

### 2.2 THE APPROACH OF MOBILE NETWORK OPERATORS

In addition to outlining the four main types of mobile data services available, our [first research brief](#) also examined the extent to which these services were offered by mobile network operators (MNOs). We reviewed all the data plans offered by the major MNOs in each of the eight countries surveyed and found that just 13% were zero-rated plans; 51% of the plans offered were service-specific and 33% were full cost.

To gain a better understanding of MNO motivations for offering zero-rated and other mobile data services, we interviewed an MNO that offered Facebook’s Free Basics — a platform that offers free access to Facebook and a number of other applications and websites that meet certain publicly available technical criteria. The operator we interviewed noted that their main motivation for offering Free Basics was to leverage the popularity of Facebook to increase their customer base. [Reports from MNOs](#) in other countries point to the same rationale for offering Free Basics.

This motivation is not surprising when you consider the fact that nearly all MNOs offering zero-rated services (in the countries covered by our research) were smaller operators — at most, the third largest operator in terms of market share. In this particular case, the MNO interviewed reported that offering Free Basics did in fact help them to increase their market share, mostly at the expense of their nearest competitor. This MNO also reported that offering Free Basics allowed them to increase significantly sales of data plans (both full cost and service-specific), as customers that signed up for and used Free Basics also paid for data to access the broader Internet, and do things like watch videos (neither videos nor large picture files are available through Free Basics).

<sup>4</sup> Full cost, service-specific and zero-rated plans were available in all eight countries. Earned data plans were available in only three of the countries (Kenya, Bangladesh and Colombia).

Critics of zero-rating argue that the offering of such services can have anti-competitive effects, particularly within the content and applications market. However, a review of the limited research currently available did not find evidence of such anti-competitive effects and argued that zero-rating is not harmful for competition. The MNO we interviewed similarly argued that the increase in their customer base and the attendant revenue from data sales was achieved on a fair and competitive basis, since Free Basics is non-exclusive and available to all MNOs in that market.

At the same time, they pointed out that because the operator is required to assume all costs in providing the service (i.e., Facebook does not pay an operator to offer Free Basics), their operational expenditure increased — a significant expense even with the revenue from the sale of additional data plans. Thus, they maintain that offering Free Basics will be only a temporary initiative. The MNO also noted what they viewed as an additional opportunity — the potential to increase their understanding of consumer preferences in order to develop more service-specific plans for them. This, they noted, would be particularly important once the Free Basics offer was concluded

### 2.3 MOBILE DATA FOR PUBLIC SERVICES

Recent months have seen the launch of several new initiatives that introduce price discrimination in the provision of mobile data for public services. In Mexico, for example, Telcel subscribers are able to access an online educational content platform at no cost, as the result of a partnership with the Carlos Slim Foundation and Mexico's Department of Education. In South Africa, Vodacom offers free online educational content in partnership with the country's Department of Basic Education. The content is available to everyone, but is zero-rated for Vodacom subscribers. According to these MNOs, a major motivation to zero-rate such services is the need to address poor educational outcomes in both countries.

However, it is important to recognise that exclusive agreements between MNOs and governments to offer zero-rated public services may make it more expensive for some citizens to access such public services — for example, if their MNO is not a participant in these agreements or if the network of the MNO offering the zero-rated services is not available in a specific geographic area. Thus, such initiatives may be of greater service to citizens where these public services are zero-rated for all mobile data users, regardless of their provider. In Jamaica, the government recently announced its intention to zero-rate mobile data for accessing government services (e.g., birth registrations, tax payments, etc.) — a programme that presumably will not be exclusive to a specific MNO in that country. The Jamaican government argues that while these services can be used for free online, accessing them is not (given the price of mobile data). Similarly, in an effort to improve access among vulnerable populations, the Peruvian government recently announced a discount in mobile data costs for disabled persons.



## 2.4 PROMOTING CONTENT AND APPLICATION DEVELOPMENT

As one interviewee noted, mobile data services should be used to **“promote the Internet as a means of innovation and not just consumption.”** For this reason, it is important to consider the impact of mobile data service offerings on content and application development. Mobile data services can support or limit content and application development. For example, some forms of zero-rating may favour the creation of applications (e.g., the Free Basics platform, where anyone can be an application developer by complying with certain technical requirements), while other types of zero-rating may reduce the possibility to create and share new apps (e.g., zero-rating services that are based on sponsoring access exclusively to pre-selected apps).

Wikipedia Zero is a zero-rated service that, among many things, aims to promote content development by making it cheaper for people (especially those in low- and middle-income countries) to contribute to Wikipedia. However, when we discussed the Wikipedia Zero service with a Wikipedia user group, we discovered that use of Wikipedia Zero for editing or contributing to Wikipedia articles was actually quite low. The group suggested that one problem might be awareness — many users were simply not aware that their MNO offered the service. A more practical issue is that Wikipedia Zero is offered only on mobile devices — as one interviewee noted, editing a Wikipedia article on a mobile device is much more difficult than doing so on a computer, particularly given the current interface.

A related issue is the support of local content development. While more evidence is needed to understand how this can best be done, our interviewees made a few suggestions. For example, governments can offer subsidies to develop local language content and/or gender-specific content, where relevant. Open data policies that make non-personal government data available for reuse in machine-readable formats can also help to stimulate the development of new local services and applications.

Governments can also encourage local content and application developers to collaborate with each other via, for example, support of [local innovation hubs](#). Such hubs have also served as crucial nodes for accessing high-speed Internet, which, in turn, supports the creation of, among other things, local online content (multimedia). Governments can also work with MNOs to encourage collaboration with content developers to provide locally relevant service-specific plans. MNOs and handset manufacturers can also contribute by making local language apps available on their devices at purchase.

## 3. POLICY AND REGULATORY GUIDELINES FOR MOBILE DATA SERVICES IN LOW- AND MIDDLE-INCOME COUNTRIES

As new mobile data services emerge, governments are increasingly faced with the decision of whether or not to intervene when MNOs offer services like zero-rating. There is no simple answer to this — it would be impossible to develop a ‘one-size-fits-all’ solution that can be applied to different and diverse countries. Instead, we recommend the following steps:

- i. On a preliminary basis, policymakers should evaluate strategies to foster connectivity at the national level and try to identify the most sustainable option(s). Thus, countries should consider the extent to which mobile data services are compatible with their unique legal and socio-economic context, considering in particular the best ways to promote competition and innovation in ICT markets and protecting freedom of expression and media diversity, while also advancing broader connectivity goals.
- ii. Policy guidelines for mobile data services, like the set recommended below, should first ensure that these services are aligned with national broadband goals.
- iii. Where a country is considering intervention, the regulator should carefully assess the best approach. In many cases, ex post regulation (i.e., intervene only if and when there is evidence of harm) will suffice. However, this depends on pre-existing levels of competition in the MNO markets, as well as the capacity and resources of the regulator.

While these steps are explained in more detail below, It is important to keep in mind that these are no more than guidelines. The real deliberation and decision-making around mobile data services must ultimately be based on national context and involve a meaningful dialogue between the government, MNOs and other private sector entities, local civil society, and citizens.

### 3.1 POLICY GUIDELINES FOR MOBILE DATA SERVICES

#### **Public consultation must be a requirement in determining the best policy and regulatory approach to mobile data services.**

As with all public policy development, it is important to understand what citizens want and need. For example, in Colombia, the regulator is currently seeking inputs on a white paper that discusses zero-rating. In that case, the regulator has decided to engage in a public dialogue before determining how to address zero-rated services. Similarly, in India, the regulator sought comments on how to rule on zero-rating and other services in that country. With regard to public consultations, it is also important that:

- a. Regulators take steps to facilitate the participation of those who are not yet online, especially where the majority of the population is offline.
- b. Regulators encourage greater participation by citizens and civil society organisations (CSOs) in these discussions. CSOs are sometimes missing from these debates, in part because they often lack the capacity to contribute effectively to technical discussions. Governments and MNOs should work with CSOs to address this gap.
- c. Public consultations should involve capacity building among the broader public as well, particularly to raise awareness around issues such as zero-rating in a way that is understandable to all.
- d. Public consultations should not be considered a one-off event; regulators should undertake to have regularly scheduled public consultations, particularly since mobile data services on offer are constantly changing.



## **Governments, regulators, and their partners in the sector need to improve the quality and availability of data for decision-making.**

The lack of evidence has negatively impacted the discussion on zero-rating and other mobile data services for some time.

- a. Regulators should conduct more frequent data collection, with the help of a wide range of stakeholders, especially around the use of different services, data charges, and quality of service for mobile data services.
- b. Regulators should openly publish the data they collect, in anonymised and aggregated form, and broken down at a minimum by gender, income level, and geographic area. This can encourage wider analysis and understanding of the impacts of mobile data services in their country.
- c. Given the different types of data services available in each country, improved data collection can provide governments with a more accurate estimation of how people are using the Internet (e.g., measuring how many people have a limited experience of the Internet via exclusive use of service-specific plans or zero-rated services, and those that have access to the full Internet via full cost plans, public WiFi, etc.). This points to the need to recognise and measure the ways mobile data services continually change, given the implications for national broadband goals.
- d. Regulators should ensure that improved data collection is also associated with improved and more frequent analyses of mobile data services. This should include analyses of potential regulatory interventions around those services (e.g., cost benefit analyses and regulatory impact assessments) as well as the use of diverse sources of data (e.g., exploiting and comparing data collected by MNOs, universities, civil society, etc.).

## **Governments should not automatically view zero-rating as a strategy for helping to achieve universal access.**

As the results from our user survey show, most zero-rating users were already using the Internet. Instead, zero-rating allows consumers to better manage their data costs by combining a zero-rated service with other mobile data services. If governments still want to incorporate zero-rating into their universal access strategies, they should encourage content providers and MNOs to address public access initiatives or other solutions targeting women, rural, and other underserved populations that still might not be able to afford a connection. Advancing universal access goals will also require tackling device costs which, as the [2015-16 Affordability Report](#) points out, remain high; MNOs and their partners could provide subsidised, Internet-enabled devices to underserved groups, such as rural communities and women.

Governments should also recognise that while emerging data services are relevant to the issue of affordability, other more important problems may need to be addressed. For example, in many low- and medium-income countries, inadequate telecommunications infrastructure remains a critical problem. In fact, several interviewees suggested that there has been too much focus on zero-rating, when major infrastructure issues still need to be addressed. In addition to ensuring adequate infrastructure, there are a number of other important [ways to reduce broadband costs](#) and expand access, including:

- a. Promoting an open, healthy, and competitive market environment.
- b. Investing in [public access](#) facilities. Respondents in our user survey reported that public WiFi was the second most frequently used option to go online.
- c. Promoting [gender equity](#) in access and use.

- d. Supporting community-managed networks.
- e. Reducing the high cost of devices.
- f. Making more spectrum available to meet demand.
- g. Ensuring a balanced and fair approach to taxation in the ICT sector.

## 3.2 REGULATORY GUIDELINES FOR MOBILE DATA SERVICES

**If, after careful consideration of their unique legal and socio-economic context, national broadband goals, and the above policy guidelines, regulators are considering whether or not to intervene when MNOs offer zero-rated services, we suggest the following:**

- a. **Regulators should take an ex-post approach where market conditions allow it<sup>5</sup>, i.e. intervene only if and when there is evidence of harm to the consumer or market failure.**

This recommendation is based on empirical evidence described earlier, specifically: (1) at the user level, zero-rating is used by 4% of users as the primary means of getting online, and for most zero-rating users, the service is used as a way to manage costs in combination with other services; (2) at the firm level, based on observations of the countries included here and a review of the limited research currently available, there is as yet no evidence of competitive harm. It is typically the smaller MNOs that offer zero-rated services, these services are offered on a non-exclusive basis, and there is no vertical integration among MNOs. Note that while an ex-post approach will be sufficient in most cases, this recommendation is based on current evidence presented here. Governments should carry out ongoing assessments of mobile data services and market competition as they evolve. If the evidence changes then a different approach may be warranted.

- b. Regardless of whether or not the regulator intervenes, we recommend the following guidelines for zero-rated services:
  - i. **Zero-rated service options should be as open to the entire Web as possible.** As we noted in our survey results, a majority (82%) of all users preferred to have a “free plan” with no restriction on the websites and applications that can be accessed. Users were willing to accept data caps and restrictions on how long the data plan would be valid.
  - ii. **Agreements between MNOs and content providers must be done on a non-exclusive basis.** Non-exclusivity should also apply to agreements between MNOs and government agencies offering zero-rated services. There should be a way for the regulator to validate the non-exclusive nature of such agreements.
  - iii. **Where zero-rated services are provided by a vertically integrated operator, the regulator should examine the situation for potential anti-competitive effects.** This can occur when the MNO has a financial interest in the firm producing the content offered via the zero-rated service. Remedies include making the content available through full cost plans instead.
  - iv. **Zero-rated public services should ideally follow all the same guidelines as other forms of zero-rating.** In addition, it should be preceded by a consultative process that allows the public to determine what kinds of public service content should be zero-rated, if at all.

5. According to EU guidance, ex ante approaches may be required in the following market situations: a) the presence of high and non-transitory barriers to entry; b) a market structure which does not tend towards effective competition within the relevant time horizon; c) the insufficiency of competition law alone to adequately address the market failures concerned. Buigues, P. 2006. “Competition Policy Versus Sector-Specific Regulation In Network Industries – The Eu Experience.” UNCTAD’s Seventh Session Of The Intergovernmental Group Of Experts On Competition Law And Policy, Geneva, November 2006.





- v. **MNOs should ensure that consumers are fully aware of the conditions of all their plans, including zero-rated services** (e.g., promotional materials for the zero-rated service should state the difference between limited versus unlimited access to all content on the Internet). Regulators should ensure that consumers have all the information they need to make informed decisions about how to access the Internet via such services and their limitations.
- vi. **In general, where these guidelines or other rules do not warrant it, avoid any regulatory restrictions that compromise the ability of MNOs to offer service-specific bundles or zero-rated plans.** However, such restrictions may be valid for operators designated as having “dominant status.”

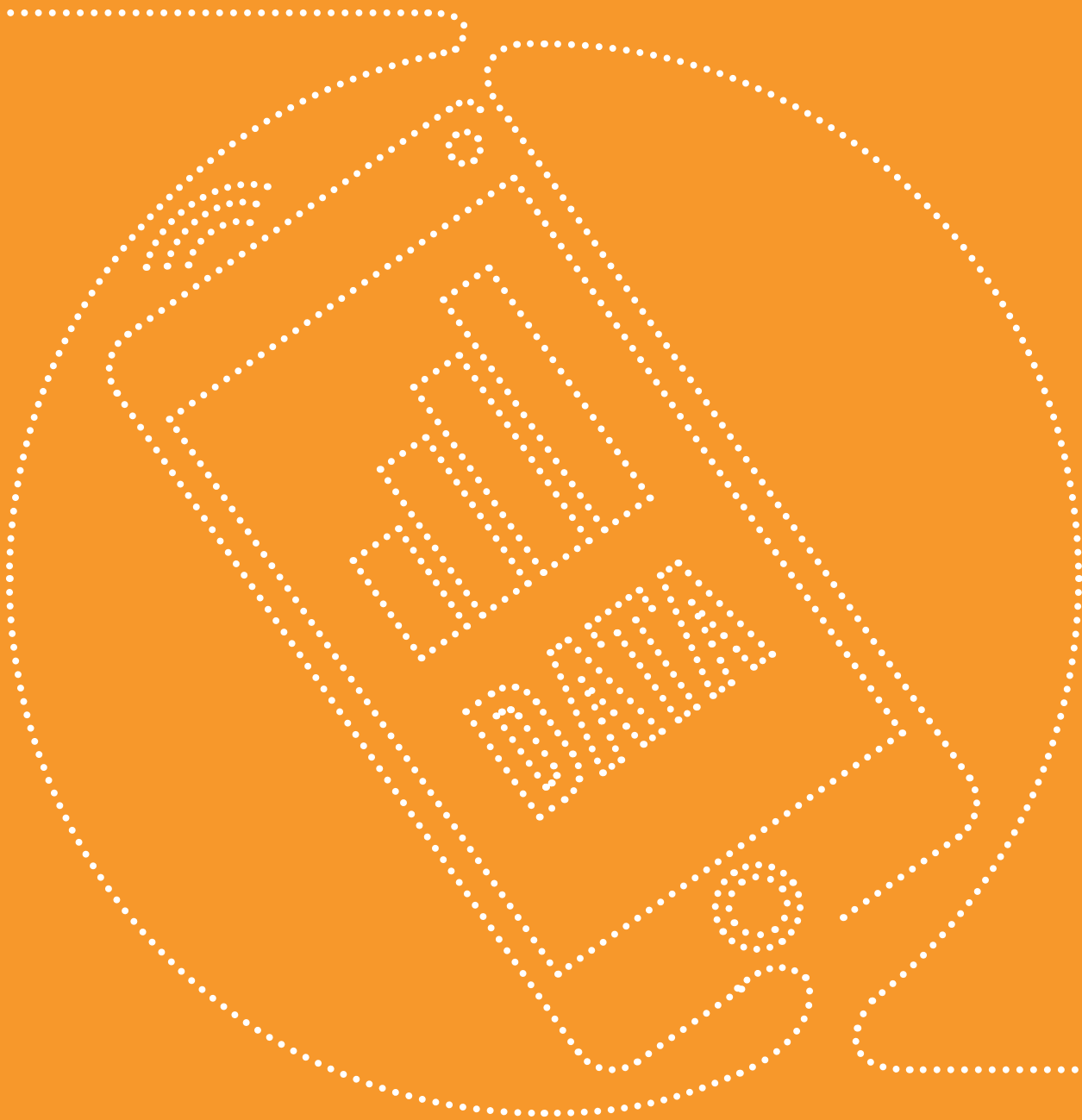
### **Regulators should be able to verify data use charges for all mobile data services**

As our user surveys suggest, zero-rating and service-specific plans can help consumers better manage their data costs. Regulators should therefore be able to assess data charges independently. This would require working with MNOs to ensure more accurate billing systems, and improving consumer awareness about the difference in use between, for example, 50MB and 500MB of data (something that is not necessarily intuitive to grasp).

- a. In addition, regulators should ensure that consumers are provided with the right tools by content providers and MNOs to track their own data use. A [survey in Ghana](#) carried out by the [A4AI-Ghana Coalition](#) in 2015 found that 72% of respondents had problems understanding how their mobile data costs were determined. Solutions include more frequent (daily/ weekly) updates on data usage charges, or a USSD (Unstructured Supplementary Service Data) message after each use. Where these are already available, the MNO should endeavour to make these features more accessible to the user. In Kenya, for example, [Safaricom’s “My Data Manager”](#) allows users to control browsing costs when their service-specific bundles have been exhausted; similar programmes are seldom observed elsewhere.

### **The analysis of consumer data from the sale of all mobile data services by MNOs, content providers, and their partners should be subject to consumer data protection laws (where applicable).**

As one of our interviewees noted, the use of zero-rating and other services provide MNOs and content providers with data on consumer online behaviour and preferences. While MNOs and others can use this to tailor service-specific plans for the benefit of their subscribers, it is also important to ensure that the use of such data adheres to data protection laws or related rules, where relevant.



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