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Closing the Digital Divide: A Briefing Note

As part of the UN Sustainable Development Goals (SDGs), world leaders have committed to strive for universal and affordable access to the Internet in least developed countries by 2020, and to ensure that women and men have equal access to basic services, including technology, by 2030. These pledges have put the digital divide squarely on the international political agenda. Yet our research shows that on current trends, we'll only reach the goal of universal access in 2042. The largest challenges are in Africa - where just one in five people are online today.

The good news is that universal access is rapidly moving up the political and business agenda. The Global Connect initiative, launched by the US State Department with the backing of the World Bank, aims at bringing an additional 1.5 billion people online by 2020. The World Economic Forum introduced its own Internet for All initiative last year. Innovations such as balloons, drones, and low-flying satellites to bring the Internet to remote rural areas have excited investors and media alike. Seven African leaders have formed the Smart Africa Alliance to accelerate socio-economic development through ICTs.

All of these initiatives could play a critical role in turning the SDG pledges into reality, if they build on the right foundations. Based on our experience working with developing country partners on digital rights and digital development, through the Alliance for Affordable Internet, the Web We Want campaign and the Women's Rights Online research network, here are some of the basic elements that we believe are required to bring all of the Internet to all of the people and eradicate the digital divide by 2030.

1. Both donors and governments must step up to the plate

Achieving the SDG targets on digital equality will require a step change in investment and leadership by developing country governments, as well as incremental financing from donors and multilateral development banks.

1.1 Developing countries must put themselves in the driver's seat. Governments should not wait for donors or international agencies to set the agenda. They must take the initiative now by convening civil society, the technical community, and business to revise (or in some instances, create) national broadband plans or ICT strategies in response to the SDG challenge.

There is no single blueprint for a successful universal access strategy. Policy choices should be aligned with the SDGs and informed by international good practice[1], but must ultimately be based on national context and priorities. However, a broadband plan or ICT strategy that is 2030-proofed will:

- Establish a clear *roadmap and timeline with increased budget allocations* to meet the ambitious SDG deadlines for ICT access and empowerment. The private sector can finance most of the infrastructure investments needed; but a 2011 World Bank study estimates around $10bn in public spending will be needed annually to achieve close-to-universal broadband access in Africa (as against estimated current public sector spending of about $3bn per year).
- Promote, orchestrate and regulate *private sector participation* in ways that channel private investments towards public policy goals.
- Lay the groundwork for the coordinated cross-government use of ICTs to *advance other SDGs* in areas such as health, education, agriculture, economic development.
- Provide for effective and timely use of monies raised through *Universal Service and Access Fund (USAF) levies*, targeting these funds at interventions to close the digital divide between rural vs. urban areas, poor vs. non-poor groups, and women vs. men. Globally, according to the World Bank, unspent USAFs totalled more than US $11bn in 2012.

[1] Sources of guidance on what has worked in diverse country contexts include the UN Broadband Commission, the ITU and the Alliance for Affordable Internet.

1.2 The international community must rapidly increase financial and practical support to close the digital divide. The uneven distribution of benefits from the digital revolution is a major cause of rising inequality globally, which in turn cripples growth, says the IMF. Spreading "digital dividends" more equitably, both between and within countries, is essential to sustained and inclusive global economic growth. If Internet penetration rates in developing countries were raised to those of developed countries, "the resulting economic activity could generate $2.2 trillion in additional GDP … and more than 140 million new jobs," according to Deloitte.

Steps that the international community should take include:

- *Dramatically increased aid and concessional lending*. Bilateral aid to ICT fell to a ten-year low in 2014, according to OECD DAC data. At only US $56 million, it amounted to less than 15% of donor spending on coal-fired power plants in the same year. Although the same data show that the World Bank has increased lending significantly in recent years, there is still a long way to go: preliminary research indicates that as little as 1% of the infrastructure lending of multilateral development banks goes into ICTs.
- *Technology transfer*, including rebalancing intellectual property regimes to reduce excess patents and royalties on software and hardware, which can hinder the growth of local tech entrepreneurship and increase end user costs. "Royalty stacking" on devices can increase the cost of a smartphone by as much as 30%.
- *Building institutional capacity* of governments to negotiate and regulate private sector participation in the ICT sector, particularly in complex areas such as spectrum auctions and public-private partnerships, so as to maximise progress on public policy goals and benefit to consumers.
- Further progress on reducing *tax avoidance in the digital economy*. The UN estimates that corporate tax avoidance costs developing countries $100bn per year, depriving countries of funds that could not only pay for better connectivity, but also improve education, energy supply, and other essential foundations for an inclusive ICT revolution. While the problem is not unique to tech companies, taxing digital businesses efficiently, simply and fairly presents particular challenges, as the OECD notes. New rules to increase tax transparency will help, but more progress is needed on determining how to apportion the profits of largely virtual businesses according to "where economic activity occurs and value is created".

2. Make digital gender equality a top priority

Web Foundation research in urban slums in nine developing countries found that not only are women 50% less likely than men to be online at all, but they are 30-50% less likely to use the Internet for personal empowerment (even controlling for education levels, age and household wealth). Connectivity initiatives will not overcome these disparities if they are gender-neutral; rather, gender equality must become an explicit policy priority.

2.1 Governments must set concrete targets on digital gender equality and regularly report on progress. Many national ICT or broadband plans contain, at best, a rhetorical commitment to closing the gender divide. Plans must include specific, time-bound targets developed in consultation with women's organisations, backed by adequate budget allocations and the collection of gender-disaggregated data for monitoring progress.[2]

2.2 Businesses and investors should adopt and report on targets, including for procurement of services from, or investment in, women-owned or women-led tech firms, and for hiring and promoting women in technology roles. ICT sector companies should additionally establish targets for increasing the proportion of women they employ, particularly at senior management and board levels, and take firm steps to eradicate the sexism and pay gaps that have been identified as a major issue in the tech industry. ICT application and service design needs to become not only user-centred, but woman-centred.

2.3 The international community must lead by example. Donors and UN agencies should work with governments to ensure that women's organisations are consulted on the design of ICT plans and programmes and that such programmes include clear, costed measures for achieving digital gender equality. They should also offer financial and practical support to make implementation a reality - setting targets for, and regularly reporting on, the proportion of their funding that promotes gender equality online.

[2] According to the ITU website, only 19 developing countries (and only two in Sub-Saharan Africa: Senegal and Mauritius) collect gender-disaggregated data on internet users, and most of this data is at least six years old.

3. All of the people, all of the Internet, all of the time

For most Europeans, constant access to fast, uncapped broadband costs little more than the latte many buy every day on their way to the office. In the Central African Republic, one month of Internet access costs more than 1.5 times the annual per capita income. To unlock the Internet's true development impact, everyone needs to be able to access and use all of the Web, without artificial rationing imposed by lack of income, know-how, or other factors.

To achieve this, governments should:

3.1 Adopt the 1 for 2 affordability target. The current UN definition of "affordable" basic broadband (a 500Mb allocation[3] of prepaid mobile data at a cost of 5% of average monthly income) is actually *un*affordable for 40-80% of the population in many developing countries, A4AI research shows. The Alliance recommends that governments and donors should pursue a more ambitious affordability target in order to achieve their SDG pledges: reduce the cost of 1Gb of prepaid data to no more than 2% of average monthly income (or "1 for 2").

3.2 Reduce import and sales taxes that inhibit Internet use. Luxury tariffs on smartphones, and extra sales taxes on mobile data and airtime, may raise short term revenue. However, as an ITU report observes, reducing or removing such taxes can dramatically increase affordability and enable more people to spend more time online - thereby boosting economic growth. The end result may be a significant net increase in total tax revenue in the medium to long term, as well as faster progress on wider development goals.

3.3 Scale up public access facilities and programmes. The Internet is not like a vaccine that works after a few injections. It is more like a library: its benefits increase dramatically with regular use. Even with lower prices, if we rely on market mechanisms alone, a large segment of women and the poor will still have to tightly ration their Internet use. As the Alliance for Affordable Internet has shown, it is essential that large-scale public access schemes are included in broadband plans. Local realities will dictate the exact shape of these programmes but possible examples include: establishing free community WiFi zones; connecting schools, libraries, hospitals and other community anchor institutions; providing free WiFi on public transport; establishing community owned networks, and many more examples. Some countries are also considering a basic data allowance or subsidy.

[3] 500Mb in this case refers to the amount of data, not the speed.

3.4 Invest in users' empowerment, not just infrastructure. "Build it and they will come" has been proven time and again to be a fallacy, and it is equally true in the digital realm.

- Make *digital and data literacy, as well as broadband connectivity in all schools, a part of every child's right to education* (along with complementary measures to overcome persistent gender inequalities in educational attainment and in science, technology and maths achievement). Our household research found that educational attainment and perceived level of digital know-how are key determinants of whether or not people are using and gaining real empowerment from the Internet.
- *Support the development of relevant and empowering content and services*. For example, while health was the topic on which women in our study were most likely to seek information (from any source), locally specific information on sexual and reproductive health rights and services was simply not available via Web or SMS in the majority of the 86 countries covered by the Web Index. Agricultural extension advice via ICTs was offered in only two of the developing countries in the Index.
- Look beyond users as passive consumers, towards enabling *creative appropriation* of technology. For example, e-government and open data initiatives need not stop with using the web to push services and information out to citizens; they can also be designed to encourage active dialogue between citizens and the state, and widen participation in policymaking processes.[4]

3.5 Strive for full access to the whole of the Internet for everyone. Initiatives that offer free (or "zero-rated") access to hand-picked websites and services are at best a short-term fix. Ensuring that everyone has the freedom to explore all of the Web is not only critical for development gains, but will ensure that local tech start-ups can flourish and compete alongside global giants. Research shows that net neutrality - preventing ISPs from favouring some kinds of Internet traffic over others - stimulates a virtuous circle between more competition, lower prices, higher connectivity, and greater innovation. 74% of countries covered in the Web Index either lack clear and effective net neutrality rules, and/or show evidence of traffic discrimination. Only a handful have held public consultations or issued decisions on how zero-rating should be treated under net neutrality rules.

[4] At the same time, making e-government and civic technology work for all also requires action on the complementary domains of access, cost and digital literacy discussed in this paper. The 2016 World Bank World Development Report observes that citizens in the top 20 percent of income in the most connected EU country are 45 times more likely to use e-services than those in the bottom 20 percent of income in the least connected EU country, while digital participation initiatives in Brazil and Uganda are predominantly used by affluent, university educated men.

4. Overhaul analogue laws for the digital era

As more people come online, it is urgently necessary for governments to overhaul laws designed for an analogue age to make them fit for purpose in the digital era. As Article 19 and Hivos observe, "challenges range from lack of transparency to arbitrary policies, vague Internet legislation with loopholes, absence of consultation with the public and poor understanding of Internet governance."

Our own Web Index research found that the majority of countries - developing *and* developed - lack clear, balanced and effective laws in key areas such as oversight of electronic surveillance (84% of countries), violence against women online (74% of countries), cybercrime (63%), legal liability of Internet intermediaries (64%), right to information (59%) and data protection (53%).

If not tackled hand-in-hand with investments in connectivity, these institutional weaknesses will most certainly limit the development gains from increased access by inhibiting users' ability to pursue freedom of expression, civic participation and personal empowerment online. What is more, as a recent World Economic Forum white paper points out, they may also lead to policies and actions that undermine the security and interoperability of the Internet itself, eroding "the Internet's enormous capacity to facilitate human progress".

This means:

4.1 The African Union and its member states should *adopt and implement the African Declaration of Internet Rights and Freedoms* as a guiding framework for the policy and legal reforms needed to encourage innovation and freedom of expression online, protect Internet users against cybercrime and hate speech, and establish transparent, necessary and proportionate limits on state use of digital surveillance powers. Other regional bodies should develop and adopt similar frameworks.

4.2 Donors should *assess human rights impact* prior to funding connectivity projects and throughout the project lifecycle, as recommended by the Telecommunications Industry Dialogue. A part of donor aid and lending for access efforts should be set aside to support domestic legal and policy reform in line with regional and international human rights standards. Support for public participation in policy dialogue and capacity building for civil society, consumer groups, policymakers and law enforcement agencies is especially crucial.

4.3 *Tech companies should take easily available steps to safeguard the human rights of Internet users* in all jurisdictions, such as implementing end-to-end encryption, improving data privacy policies and user consent procedures, conducting regular human rights impact assessments, making it easier for users to report and get action on ICT-mediated violence and abuse, and publishing government requests for user data as well as copyright takedown demands.[5]

4.4 *Aid and lending to increase Internet access should be decoupled from cybersecurity negotiations*. Linking the two could have unintended and damaging consequences. As the World Economic Forum notes, many governments have begun a "slippery slide" down the slope to using national security to justify "the control of political communications and cross-border content more generally", passing hasty and ill-informed laws with little public debate. While ensuring the safety of Internet users is important, donors should not add fuel to the fire by pressing for quick adoption of cybersecurity laws, but should rather invest in and support processes such as the African Declaration on Internet Rights and Freedoms (above) and equivalent national level policy dialogue.

[5] See recent assessments from Ranking Digital Rights and Take Back the Tech for more detail.

5. Update business models

Companies can help to achieve the SDG universal access goals by:

5.1 **Allowing competitors access**, at reasonable market prices, to costly infrastructure, such as towers and cables, and facilitating sharing or trading of spectrum (the chunks of the airwaves used to beam the Internet) as well as unlicensed use of low-value spectrum for public benefit (e.g. community wi-fi).

5.2 **Enhancing tax transparency** by publishing country-by-country data on income earned and taxes paid. A 2014 study by Transparency International found that Vodafone and Telefonica were the only ICT companies that released such information; Amazon, Apple, Google and IBM did not even publish a full list of countries where their subsidiaries operate.

5.3 **Guaranteeing pricing transparency**, in fixed-line broadband as well as mobile data packages.

Conclusion

As the inventor of the Web and Web Foundation founder Sir Tim Berners-Lee put it: *"The web is vital to democracy, [and] a public resource on which people, businesses, communities and governments depend."* Like the other common goods at the heart of the SDGs - education, climate, water, forests - a sustainable future requires that everyone share equally in its benefits.

If we allow current trends to continue, self-driving cars will be a daily fact of life in many countries, before basic, universal Internet access is in others. However, if world leaders are serious about delivering on the Sustainable Development Goal promises, there is no choice but to marshall the resources, policy change and political will needed to end digital inequality.