

# Issue Paper: Asia-Pacific Bureau Local and Localised Content



November 2017

Building on the key considerations and guiding principles presented in the ***Internet Society Policy Brief on Local Content***,<sup>1</sup> this issues paper focuses on the challenges and opportunities for promoting local and localised content on the Internet in the Asia-Pacific region. Please refer to the policy brief for an introduction to the topic.

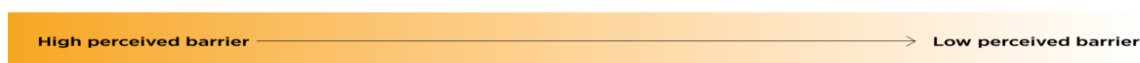
## The Issues

### Lack of relevant content is an enormous barrier to Internet adoption

Across several developing economies, respondents to the GSMA Intelligence Consumer Survey cited lack of locally relevant content as the top barrier to mobile Internet adoption,<sup>2</sup> but also Internet adoption in general.

Figure 1. Findings from the GSMA Intelligence Consumer Survey 2015 in selected Asian countries on the perceived barriers to mobile Internet adoption

BARRIER	LACK OF AWARENESS AND LOCALLY RELEVANT CONTENT	LACK OF DIGITAL LITERACY AND SKILLS	AFFORDABILITY BARRIER	LACK OF NETWORK COVERAGE	SECURITY AND TRUST BARRIER	OTHER
CHINA	30%	89%	11%	0%	2%	15%
INDIA	80%	21%	23%	3%	4%	9%
INDONESIA	75%	10%	46%	2%	3%	12%
PHILIPPINES	51%	27%	13%	8%	1%	22%
THAILAND	88%	23%	22%	1%	2%	3%
VIETNAM	80%	20%	24%	0%	1%	12%



Source: GSMA, "The Mobile Economy Asia Pacific 2016," 2016

<sup>1</sup> Internet Society, "Local Content: An Internet Society Public Policy Briefing," 30 October 2015, <https://www.internetsociety.org/policybriefs/localcontent>. See also: Internet Society, "The Benefits of Local Content Hosting: A Case Study," May 2017, [https://www.internetsociety.org/sites/default/files/ISOC\\_LocalContentRwanda\\_report\\_20170505\\_final.pdf](https://www.internetsociety.org/sites/default/files/ISOC_LocalContentRwanda_report_20170505_final.pdf).

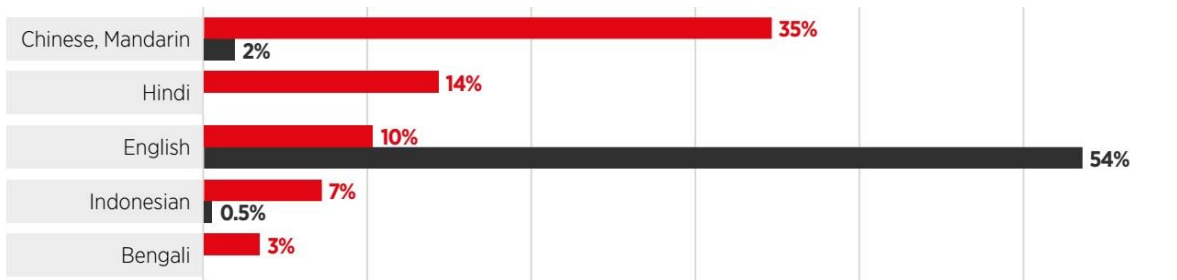
<sup>2</sup> GSMA, "The Mobile Economy 2017," 2017, <http://www.gsma.com/mobileeconomy/>.

## There is a digital language divide that is reinforcing inequalities in online representation and participation

Globally, there are over 7,000 living languages, and 50% of these are from the Asia-Pacific region.<sup>3</sup> A large number are still not present on the Internet—87% of the websites are in just ten languages.<sup>4</sup>

According to the latest data from W3Techs, about 52% of the websites are in English.<sup>5</sup> Yet, only an estimated 10% of Asia's population can understand English (see Figure 2). By contrast, while 35% of Asia's population understand Chinese (Mandarin), only 2% of the websites are in Chinese. Moreover, less than 0.1% of websites are in Hindi—the second most commonly spoken language in Asia.

Figure 2. Top five most commonly spoken languages in Asia (in red) versus percentage of websites worldwide by language (in black)<sup>6</sup>



Source: GSMA, "Consumer Barriers to Mobile Internet Adoption in Asia," 2016

There are over 400 different languages in India alone.<sup>7</sup> A study conducted by the Internet and Mobile Association of India showed that 43% of the offline population in rural areas are likely to use the Internet if the content is provided in local languages.<sup>8</sup>

### The language that you speak shapes your experience of the Internet

Wikipedia hosts about 280 languages. A study of the most edited topics in different Wikipedia language editions showed striking disparities in what causes controversy in online language communities.<sup>9</sup> Another study revealed that 74% of the concepts on Wikipedia have articles in only one language.<sup>10</sup> These findings suggest that content on the Internet will be different depending on the language that you know.

These also suggest that the information available for different languages online have implications for who and what gets represented, and by whom, which in turn shape the way people interact offline.<sup>11</sup>

On Google Search, the language that you use will generate different results, as illustrated in a research that compared Google searches made in the West Bank in Hebrew, Arabic and English, (see Figure 3). The fact that Google can send Arabic speakers to one part of the city and Hebrew speakers to another when they are searching for the same thing could risk reinforcing social segregation.<sup>12</sup>

<sup>3</sup> Ethnologue, <https://www.ethnologue.com/>.

<sup>4</sup> W3Techs, "Usage of content language for websites," accessed on 12 May 2017, [https://w3techs.com/technologies/overview/content\\_language/all](https://w3techs.com/technologies/overview/content_language/all).

<sup>5</sup> Ibid.

<sup>6</sup> Languages with no "website by language" data are used by less than 0.1% of websites.

<sup>7</sup> Ethnologue, "India," <https://www.ethnologue.com/country/IN>.

<sup>8</sup> Prasant Naidu, "Availability of Local Language Content Can Boost the Growth of Internet in India by 24% - IAMAI & IMRB Study," *Lighthouse Insights*, 28 February 2014, <http://lighthouseinsights.in/availability-of-local-language-content-can-boost-the-growth-of-internet-in-india-by-24-iamai-imrb-study.html/>.

<sup>9</sup> Taha Yasser et al., "The most controversial topics in Wikipedia: A multilingual and geographical analysis," in P. Fichman and N. Hara, eds., *Global Wikipedia: International and cross-cultural issues in online collaboration* (Scarecrow Press, 2014), <https://arxiv.org/ftp/arxiv/papers/1305/1305.5566.pdf>.

<sup>10</sup> Brent Hecht and Darren Gergle, "The Tower of Babel Meets Web 2.0: User Generated Content and Its Applications in a Multilingual Context," April 2010, [http://brenthecht.com/papers/bhecht\\_chi2010\\_towerofbabel.pdf](http://brenthecht.com/papers/bhecht_chi2010_towerofbabel.pdf).

<sup>11</sup> Holly Young, "The digital language divide," *The Guardian*, undated, <http://labs.theguardian.com/digital-language-divide/>.

<sup>12</sup> Ibid.

This means that efforts such as increasing broadband access and digital skills to boost local content development is necessary but insufficient in bringing about a more genuinely representative and inclusive digital environment. Doing so requires multi-stakeholder dialogue on the responsibility of search engines like Google, social media sites like Facebook and YouTube, and other platforms that play large roles in mediating Internet use.<sup>13</sup>

Figure 3. West Bank restaurant search based on language



Source: Mark Graham and Matthew Zook cited in Holly Young, "The digital language divide," *The Guardian*, undated

## Growth in the number of Internet exchange points in the region is slow

There are currently about 60 active Internet exchange points (IXPs) operating in the Asia-Pacific region. These are in various stages of development, having between 2 to 170 participants, but more than half are concentrated in developed markets like Hong Kong, Japan, New Zealand and Singapore. Most emerging economies in the region only have one or two IXPs, and more than 20 countries—most of them in the Pacific—do not have a single IXP.<sup>14</sup>

If more IXPs are established, more local Internet traffic can be exchanged and routed locally. Cost and network delays are reduced when content is hosted in a local data centre and delivered through an IXP. Experience shows that access speed for local content can improve as much as tenfold with an IXP in place.<sup>15</sup> These improvements often result in incentives for local developers to produce more locally relevant content and applications. The presence of an IXP might also encourage international content providers to set up caches in a country.

IXPs are not growing as quickly because the establishment of an IXP requires the collaboration of many actors, many of whom are competitors. Moreover, best practices have shown that IXP location and management should be as neutral as possible, i.e., independent of commercial or government influences. In the Philippines, PLDT, the dominant legacy telco and Internet service provider, only agreed in late 2015 to partially connect with the Philippine Open Internet Exchange—the country's sole open and neutral IXP—partly due to public pressure.<sup>16</sup> Previously, according to one estimate, 40-70% of local traffic was routed through either Hong Kong or Los Angeles (US), mostly due to transit through PLDT's gateway.<sup>17</sup>

<sup>13</sup> Mark Graham, "Let's make platform capitalism more accountable," *New Internationalist*, 13 December 2016, <https://newint.org/blog/2016/12/13/making-platform-capitalism-more-accountable/>.

<sup>14</sup> Noelle Francesca de Guzman, "IXPs level up in emerging Asia-Pacific," *Internet Society*, 15 February 2016, <https://www.internetsociety.org/blog/asia-pacific-bureau/2016/02/ixps-level-emerging-asia-pacific>.

<sup>15</sup> Internet Society, "Internet Exchange Points: An Internet Society Public Policy Briefing," 30 October 2015, <https://www.internetsociety.org/policybriefs/ixps>.

<sup>16</sup> Grace Mirandilla-Santos, "The curious case of Philippine broadband (Part 2)," *Telecom Asia*, 14 April 2016, <https://www.telecomasia.net/blog/content/curious-case-philippine-broadband-part2>. Note: PLDT still maintains a bilateral agreement with its main competitor, Globe Telecom, to exchange traffic.

<sup>17</sup> Internet Society, "Unleashing the Potential of the Internet for ASEAN Economies," 22 March 2015, <https://www.internetsociety.org/doc/unleashing-potential-internet-asean-economies>.

## Efforts to develop local online content need to be sustainable

For example, in 2012-2013, the Wikimedia Foundation supported a project implemented by the Centre for Internet and Society and the local Wikimedia chapter in India to train 2,500 volunteers on how to edit and create content on Wikipedia, Wiktionary and WikiCommons in their local languages.

During this period:<sup>18</sup>

- 13,400 articles were added in Tamil, Malayalam, Kannada and Hindi.
- Page views on the 25,000 Bengali articles grew from 1.4 million to about 4 million.
- There were consistently over 100 active Malayalam Wikipedia editors.

However, after the project ended, there was a significant decline in contributors, as there were no facilitators to constantly engage with and support the contributors.

In response to the lessons learned from the project, the Centre for Internet and Society has established a Wikipedia Digital Centre in Andhra Loyola College to support students and volunteers in growing Wikimedia content in various local languages in India.<sup>19</sup>

## The Opportunities

### The majority of governments are creating or supporting the creation of local content online

Governments could play a key role in driving the growth of local content by collaborating among government agencies and with other organisations in creating and facilitating local content.

In Asia, the majority of government websites or portals are available in the countries' official languages. Two governments do not have a functioning national portal—Cambodia and the Democratic People's Republic of Korea, and two only have it in English—Bhutan and Pakistan.<sup>20</sup>

#### Government of Bangladesh commits to local content development<sup>21</sup>

In Bangladesh, the Prime Minister's Office, through its Access to Information Programme, developed a national portal to allow citizens to access 25,000 government websites and 175 e-services (such as online passport application and electricity bill payments) in Bengali, its national and official language. Over 70,000 government officials have been trained to create and update online content. Other portals developed in Bengali include:

- e-Tathyakosh – with over 110,000 pages of livelihood-related information developed by 350 different organisations.
- Forms Portal – with 1,000+ forms of 115 government offices.
- Service Portal – with 400+ service profiles and process maps.
- Teachers Portal – with over 40,000 lessons being accessed by some 60,000 teachers.

<sup>18</sup> Centre for Internet and Society, "India's Indigenous Languages Drive Wikipedia's Growth," <http://cis-india.org/news/techcrunch-august-6-2013-mahesh-sharma-indias-indigenous-languages-drive-wikipedias-growth>.

<sup>19</sup> Centre for Internet and Society, "Telugu Wikipedia Education Program at Andhra Loyola College, Vijayawada," <http://cis-india.org/openness/events/telugu-wikipedia-education-program-at-andhra-loyola-college-vijayawada>.

<sup>20</sup> Alex Smith, "How Understandable and Accessible are Asian Government Websites," *GSMA*, 21 December 2016, <http://www.gsma.com/mobilefordevelopment/programme/connected-society/how-understandable-and-accessible-are-asian-government-websites>.

<sup>21</sup> Roger Harris et al., "Report on the Mid-Term Evaluation of the Access to Information - II Project (a2i) for United Nations Development Programme Bangladesh," November 2015.

Governments have also begun to open up their data, and apply Creative Commons licenses that encourage the use, modification and translation of content. In Australia, Creative Commons licenses are used by government agencies at all levels. The Government of Indonesia's open data portal uses a Creative Commons license that allows users to distribute, remix, tweak and build upon the data, even commercially.<sup>22</sup> About 10 Asia-Pacific governments have developed interoperability standards,<sup>23</sup> including content-related standards, to ensure that content produced can be easily reproduced, shared and localised by different agencies.

## Efforts are being made in the region to promote the development of local and localised content, but an integrated, multi-stakeholder approach is missing

The Indian government last year announced that all mobile phones (smartphone and feature phone) sold in the country from July 2017 must be able to display content in the 22 official Indian languages and provide input capability in at least three languages—English, Hindi and one regional language.<sup>24</sup>

However, hardware manufacturers are just one of the many stakeholders that need to consider language and localisation<sup>25</sup> issues. The policy also mandates the development of applications and content that are user-friendly and capable of rendering in 22 languages.

To support this process, operators and other players in the mobile ecosystem could open up key API assets, such as billing, location, messaging and mobile money, to local start-ups and third-party developers, enabling the development of content and services that appeal to local interests.<sup>26</sup> For example, Axiata Group's open-source API platform allow local operators in Asia to create new products and services on Axiata networks, paving the way for over 9,000 new applications since the platform launched in 2015.<sup>27</sup>

An integrated digital ecosystem that promotes the growth of local and localised content has yet to materialise in India and many other countries in the Asia-Pacific region. Stakeholders also need to ensure that women, ethnic minorities and other marginalised groups are able to participate in creating online content.

## Users can also be content creators

In-country field studies by GSMA and Mozilla in five emerging countries, including Bangladesh, Cambodia and India,<sup>28</sup> confirmed that there is a latent appetite among users in emerging markets to create online content, and the users mostly likely to create online content are young people.

Yet, the research found that many first-time Internet users in emerging economies have not progressed beyond social media.<sup>29</sup> These users have not yet been sensitised to the possibility of freely publishing to an audience wider than their friends or family on social networking and messaging platforms.

<sup>22</sup> Creative Commons, "Government use of Creative Commons," [https://wiki.creativecommons.org/wiki/Government\\_use\\_of\\_Creative\\_Commons](https://wiki.creativecommons.org/wiki/Government_use_of_Creative_Commons).

<sup>23</sup> The countries with e-government interoperability frameworks are: Australia, China, Hong Kong, India, Japan, Malaysia, Nepal, New Zealand, Pakistan, Philippines, Sri Lanka and Thailand. Ana Lisboa and Delfina Foares, "E-Government Interoperability Frameworks: A Worldwide Inventory," *Procedia Technology*, vol. 16 (2014), pp. 638-648, <http://www.sciencedirect.com/science/article/pii/S2212017314002394>.

<sup>24</sup> Anant Computing, "Made in India in all 22 Indian languages," 8 November 2016, <http://www.anantcomputing.in/made-india-22-languages/>.

<sup>25</sup> Localisation refers to the adaptation of a product, application or document content to meet the language, cultural and other requirements of a specific target market (a locale). For emerging economies in the Asia-Pacific region, the other requirements may refer to: (1) the need for the app or content to be light as users may have limited storage space on their phones; (2) the need to work with slow connections; and (3) the need to be optimised to use less or no data as the cost of an Internet connection is still unaffordable to many. See W3C, "Localization vs. Internationalization," <https://www.w3.org/International/questions/qa-i18n>.

<sup>26</sup> GSMA, "The Mobile Economy 2017," 2017, <http://www.gsma.com/mobileeconomy/>.

<sup>27</sup> GSMA, "Consumer Barriers to Mobile Internet Adoption in Asia," 2016, <http://www.gsma.com/mobilefordevelopment/programme/connected-society/consumer-barriers-mobile-internet-adoption-asia>.

<sup>28</sup> GSMA and Mozilla, "Approaches to local content creation: Realising the smartphone opportunity," February 2016,

[http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/02/Approaches-to-local-content\\_Realising-the-smartphone-opportunity.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/02/Approaches-to-local-content_Realising-the-smartphone-opportunity.pdf).

<sup>29</sup> See Issues Paper on Social Media.

But even when users become interested in creating digital content, they lack the tools and skills to do so. Therefore, the study recommends large-scale efforts to build digital literacy and skills, especially among youth, as well as investment in products and services that enable content creation, particularly on mobile devices.

The study also pushes for increased access to and affordability of smartphones as a way of enabling local content creation: Smartphone content is richer, and more tactile and visual than feature phone's largely text-only content. The shift is significant in that smartphones make it more likely for lower-literacy users to be able to produce and retrieve content that is relevant to them. This can also enable the creation of content in indigenous languages that only exist in oral form.

## Internationalised Domain Names contribute to local language content, but adoption has been slow

Internationalised Domain Names (IDNs), first implemented in 2000, allow Internet users to type a domain name in their local script using their native language, instead of an English version.

Since 2011, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the European Registry of Internet Domain Names (EURid) have been analysing the deployment of IDNs, and they found a strong correlation between the language or script of the domain names and the language of the associated website content. This means that IDNs are accurate predictors of the language in which the web content appears, and have a vital part to play in fostering a multilingual Internet.<sup>30</sup>

There were 6.8 million IDNs as of December 2015. Despite an 8% growth since 2014, only 2% of the world's domain names are IDNs.<sup>31</sup> The slow progress is largely because many of the systems and applications that make the Internet useful still do not support IDNs. Furthermore, Internet users may be unaware that it is possible to register domain names in local language scripts.

## Alignment with the SDGs

The Sustainable Development Goals (SDGs) refer to the use of ICT and various technologies and innovations to achieve the SDGs. The relevant targets include the following:

- Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women (SDG5b).
- Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020 (SDG9c).

All the SDGs stress the importance of inclusive development that takes into consideration the needs of all people, irrespective of gender, age, race, ethnicity and ability. Policies and investments that promote local and localised content online to meet these different needs could contribute to achieving the SDGs.

In addition, the need to promote linguistic diversity and local content development on the Internet is reflected in the World Summit on the Information Society Action Line C8: Cultural diversity and identity, linguistic diversity and local content,<sup>32</sup> and UNESCO's Recommendation Concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace in 2003.<sup>33</sup>

<sup>30</sup> EURid, "World Report on Internationalised Domain Names 2017," <http://idnworldreport.eu/>.

<sup>31</sup> Ibid.

<sup>32</sup> WSIS Plan of Action, Action Line C8 – Cultural diversity and identity, linguistic diversity and local content 12 December 2003, <http://www.itu.int/net/wsis/docs/geneva/official/poa.html#c8>

<sup>33</sup> See <http://www.unesco.org/new/en/communication-and-information/about-us/how-we-work/strategy-and-programme/promotion-and-use-of-multilingualism-and-universal-access-to-cyberspace/>.

## Questions to Think About

- What are the successful business models for accelerating the development of local and localised content?
- What is an appropriate forum for multi-stakeholder exchange and cooperation in creating a local content ecosystem?
- What kinds of tools and user education programmes could radically lower the barriers to content creation?
- What are some specific measures to ensure that local and localised content is gender sensitive?

