Media Summary for "Moving Toward an Interconnected Africa: The 80/20 Initiative"

July 2021

Overview / State of Internet in Africa

There is an urgent need for improved Internet access across Africa, especially in the wake of the coronavirus pandemic. According to the United Nations Economic Commission for Africa, fewer than 1 in 5 households have Internet access, even though it is a source for life-saving information as well as digital instruction for nearly 250 million children across the continent during the COVID-19 pandemic. In addition, reliable and affordable Internet access will help fuel economic growth and productivity. According to another published report, the Internet economy has the potential to contribute up to US$180 billion to Africa's gross domestic product (GDP) by 2025.

What is an IXP / Why is it a Viable Solution

A shared vision of the Internet Society and the Africa Peering and Interconnection Community is for 80 percent of the Internet traffic consumed in Africa to be accessed locally, and only 20 percent routed from outside the continent. Local availability results in faster and more affordable Internet access – and Internet exchange points (IXPs) are one way that can be done.

An IXP is technical infrastructure where networks, including Internet service providers, mobile operators, enterprise networks, research and education networks, e-Government services, local, regional, and international content delivery networks (CDNs) come together to connect and exchange Internet traffic.

IXPs enable the local exchange of Internet traffic avoiding the use of expensive international transit routes, making Internet access much more affordable.

For example, customers spent US$5.92 and US$12.75 for 500MB prepaid data to access the Internet in Kenya and Nigeria, respectively when 80 percent of their traffic was routed abroad before 2012. Once both countries had 70% of their traffic accessible locally in 2020, users paid 2.4 and 3.8 times less than what they paid for the same volume of data in Kenya and Nigeria.

IXPs also improve the quality of Internet access by providing more direct network connections. Access speeds for content can be up to 10 times faster with an IXP because traffic is routed locally vs international transit routes.

In addition, IXPs help attract a range of local and international operators because they provide a cost-effective way to access potential Internet users. This in turn spurs innovation and creates opportunities as it encourages people to create local content and applications.

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What We're Doing / What We've Done

The Internet Society has been working with the African Internet community to improve local Internet infrastructure and help establish IXPs. Key to this effort is strengthening the trust and cooperation between those that build the Internet.

Since 2010, we have a seen a significant increase in the number of IXPs across the continent:

- The number of African IXPs has increased by 58 percent over the past [eight] years, going from 19 in 2012 to 46 in 2020.

- More than half of the countries in Africa have an IXP; six countries have more than one.

- The most developed Internet ecosystem is in South Africa, which has reached the goal of 80 percent of localized traffic, followed by Kenya and Nigeria with 70 percent each. All three have more than 50 networks connected to local IXPs and a broad diversity of local, regional, and international networks.

- Internet traffic is often exchanged through international hubs that with higher costs. The report shows average port charge at an IXP is significantly lower than the international IP transit cost – resulting in savings of up to US$240,000 per network from exchanging traffic at the IXP rather than accessing it using international IP transit. In fact, when networks exchange traffic with each other at IXPs they do so at no cost.

- The presence of content delivery networks has increased significantly and the amount of locally available content and demand for content hosting has increased. The report shows at least 33 countries in Africa have at least one international content delivery network.

Country Success Story 1:

When Mauritius-based media company La Sentinelle Ltd. moved from expensive hosting with a European cloud company to locally hosting its own cloud service and meeting ISPs at Mauritius Internet Exchange Point (MIXP), latency fell from 250-300 ms to less than 10 ms. Latency or "lag time" is the time it takes move data between two points on the Internet. The higher the lag time, the poorer the user experience, the lower the lag time, the better the user experience. The decreased latency enabled the company's French-language daily newspaper to stream real-time election results to its more than 9 million monthly visitors.

Next Steps / Looking Ahead

What are new goals for Africa in the next 4 years? Are there current or future projects?

Though half the countries in Africa have IXPs, a large majority have yet to increase levels of Internet traffic that is locally exchanged from 20% to 80% and above.

Over the next four years, the Internet Society will continue working with the Africa Peering and

Interconnection Community to set a new goal with new targets. The organization will also advocate for policy and regulatory environments to enable local IXPs to realize their full potential while supporting the development and deployment of IXPs throughout the continent.

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