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Promoting Content in Africa



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Internet growth rate is slowing far too early

Internet growth has been impressive in recent years

Ten years since “connecting the next billion” focused on infrastructure and mobile.

- the past ten years it has grown at double-digit rates to 20% penetration in Africa

- Recently growth dipped to just 9%

Milestones:

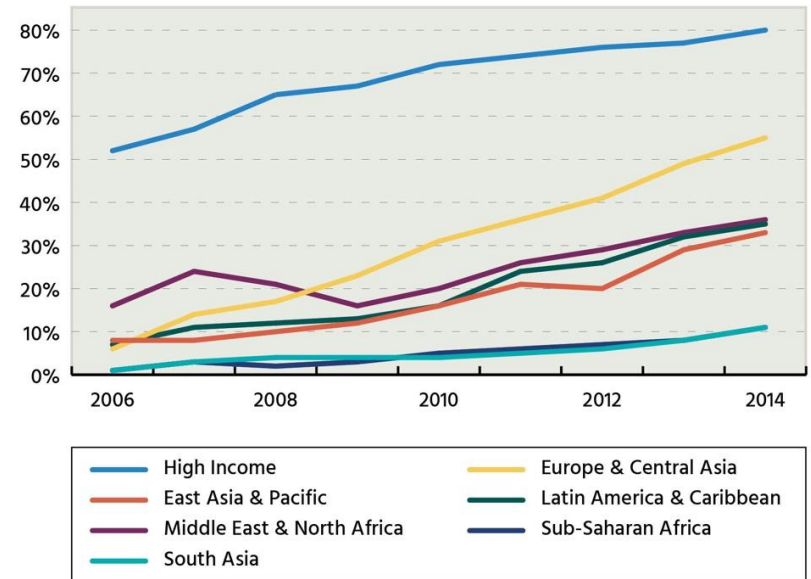
- 1 billion: 2005

- 2 billion: 2010

- 3 billion: 2014

- Currently: 3.4 billion

Internet Access by Region



Source: World Development Report 2016.



Need to increase demand

Push for infrastructure has been very successful:

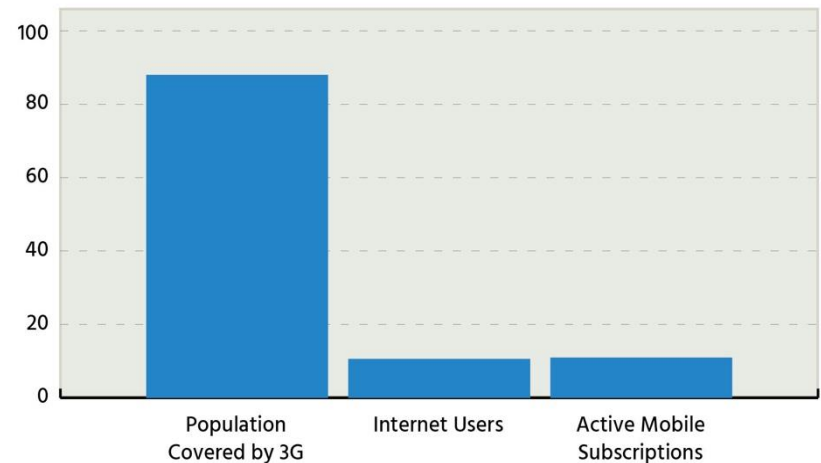
- From one submarine cable to many
- Leapfrogged fixed-line to mobile
- Extensive coverage of 3G, with more on the way through simple upgrades

Consequently costs are falling

- Cost of 500MB close to falling below 5% of median monthly income
- Cheap powerful smartphones: Android One, M-Kopa
- Democratisation of infrastructure: OpenBTS, OpenCellular

Uptake is not there!

Availability, Adoption, Subscription in Rwanda



Source: ITU 2015.

To increase demand: relevant content!

- Availability is not mentioned
- Too slow is the smallest percentage
- Expensive is an issue, not the only one

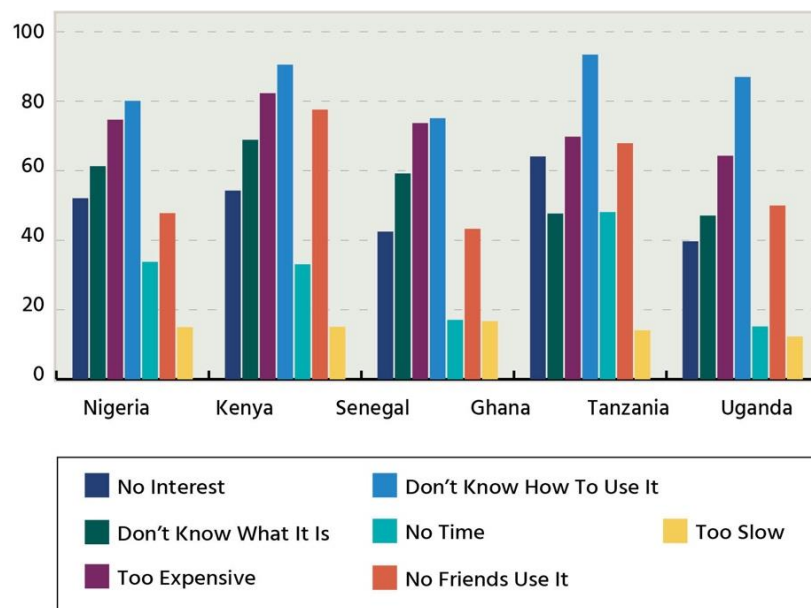
Relevance:

- No Interest
- No friends

Greater relevance can mitigate:

- Don't know what it is
- Don't know how to use it
- In some cases: too expensive

Reasons for no Internet
(of non-users)



Sources: Research ICT Africa Survey 2011-2012.

Need to focus on availability of relevant content & distribution

Content

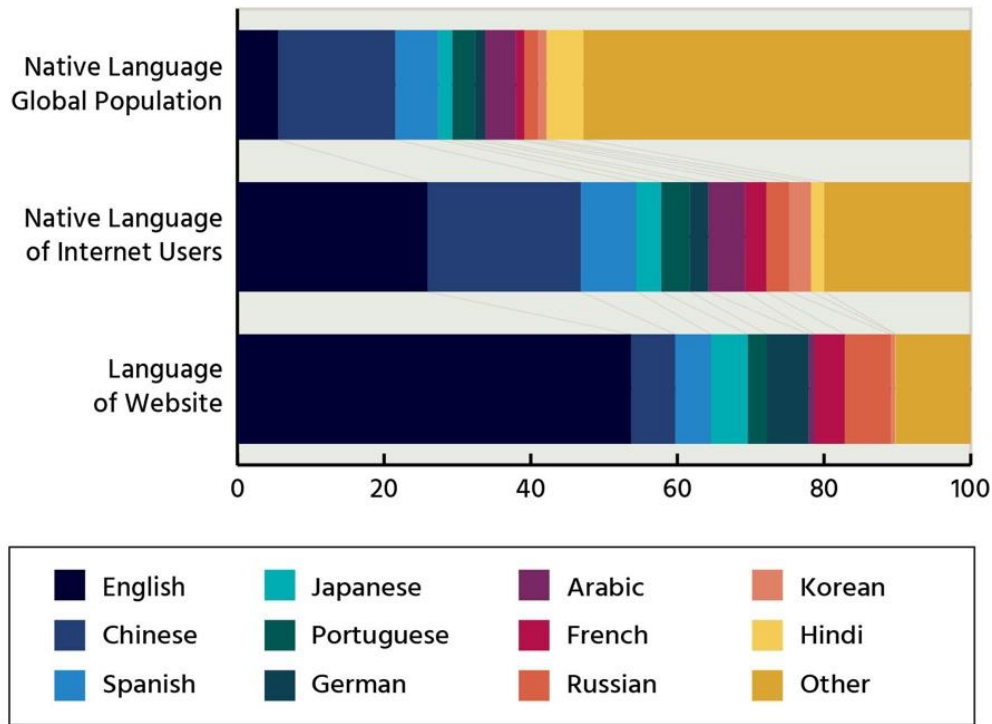
- Must be in a language understood by the local population
- Must meet local demand, whether social, educational, government, or business
- Locally developed content is likely to meet local demands, and should be promoted

Distribution

- Most content today is hosted abroad, primarily US and Europe
- This can increase the cost and latency of access, thereby lowering usage
- Local and regional content distribution is critical to increase usage of available content

Key to content: Language

Native Speakers vs. Online Content



English is overrepresented

Government works in English / French / Po

Local languages are official, but used?

Languages need a catalyst in bottom 2 bars: little content -> few users -> little content -> etc.

Add support on social media: multilingual posts

Language drives adoption

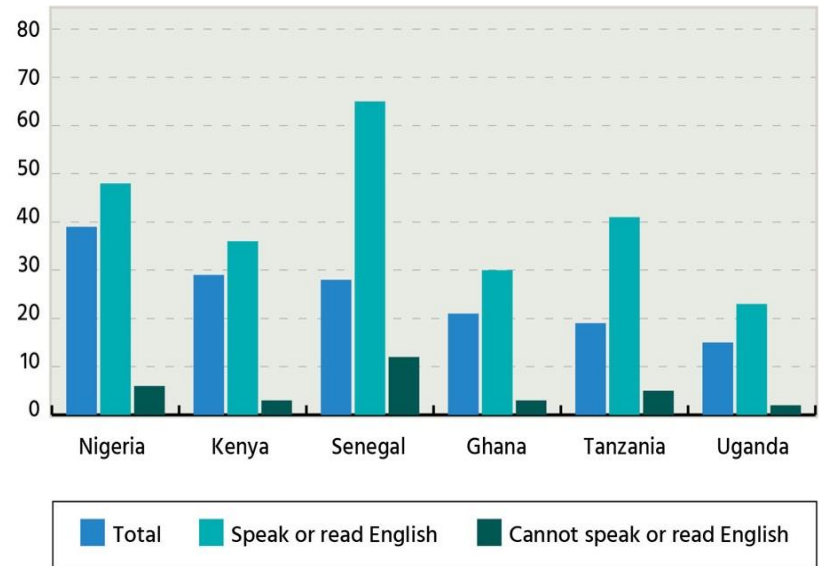
Smartphones are only useful when you can interact with content

WhatsApp etc. work on simpler feature phones

Users adopt smartphones to interact with more types of content: websites, apps

Little adoption by people that cannot read English suggests there is little use for the extra feature if you cannot read English

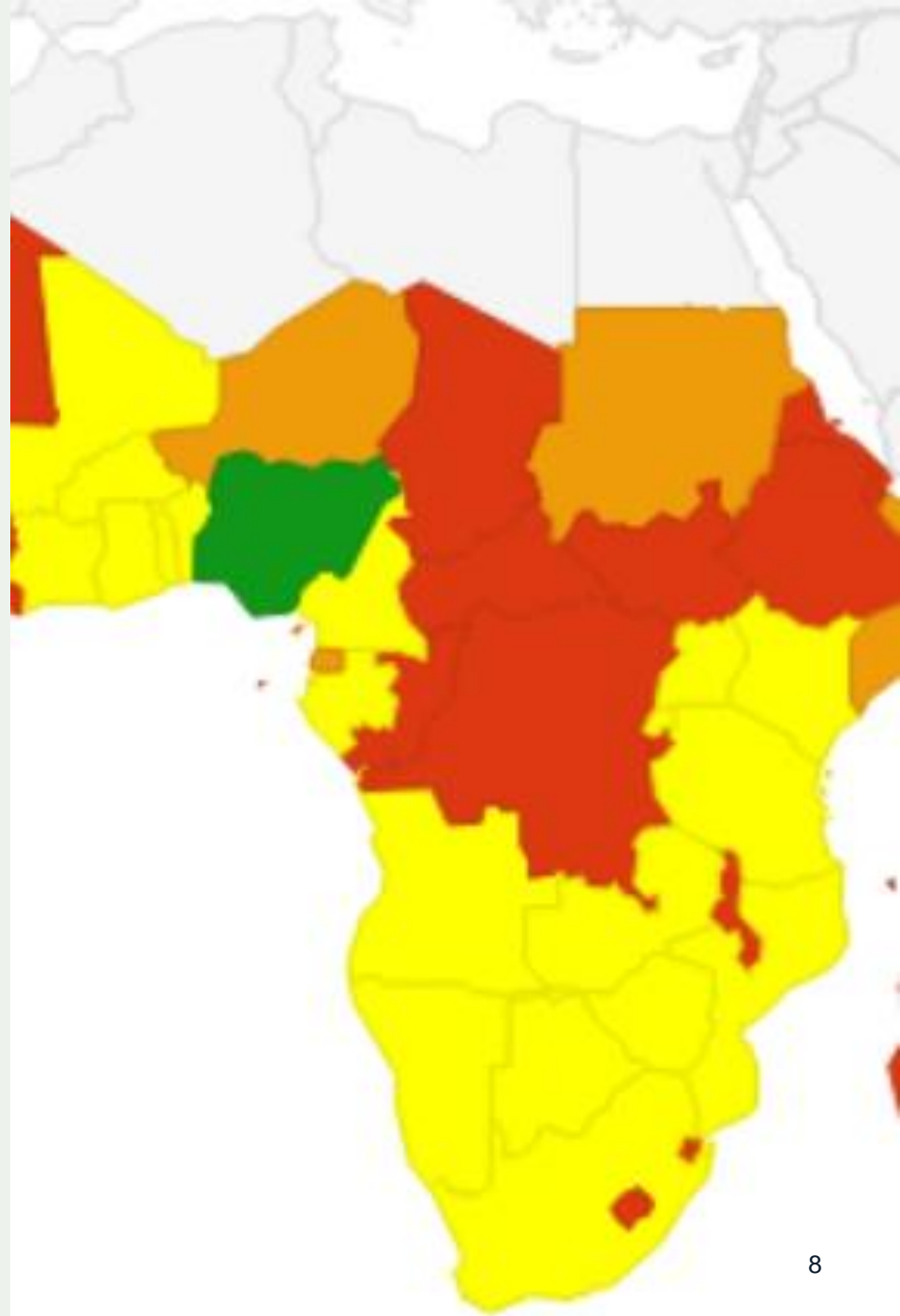
Likelihood of Smartphone Ownership by English Reading Ability



Sources: PEW Research: Spring 2014 Global Attitudes Survey.

Key to language: monetisation

- Online advertising in a very concentrated market.
- The number of supported languages for ads is limited.
- European: English, French, Portuguese
- Afrikaans
- Policies against including ads (in a supported language) on pages in a different language:
- You cannot e.g. including English ads on a Swahili website
- Supported payment and payout mechanisms are very limited



Content Availability: Distribution and payment platforms

Platforms make it easier to deliver content to end-users

Legal considerations may hinder or block availability

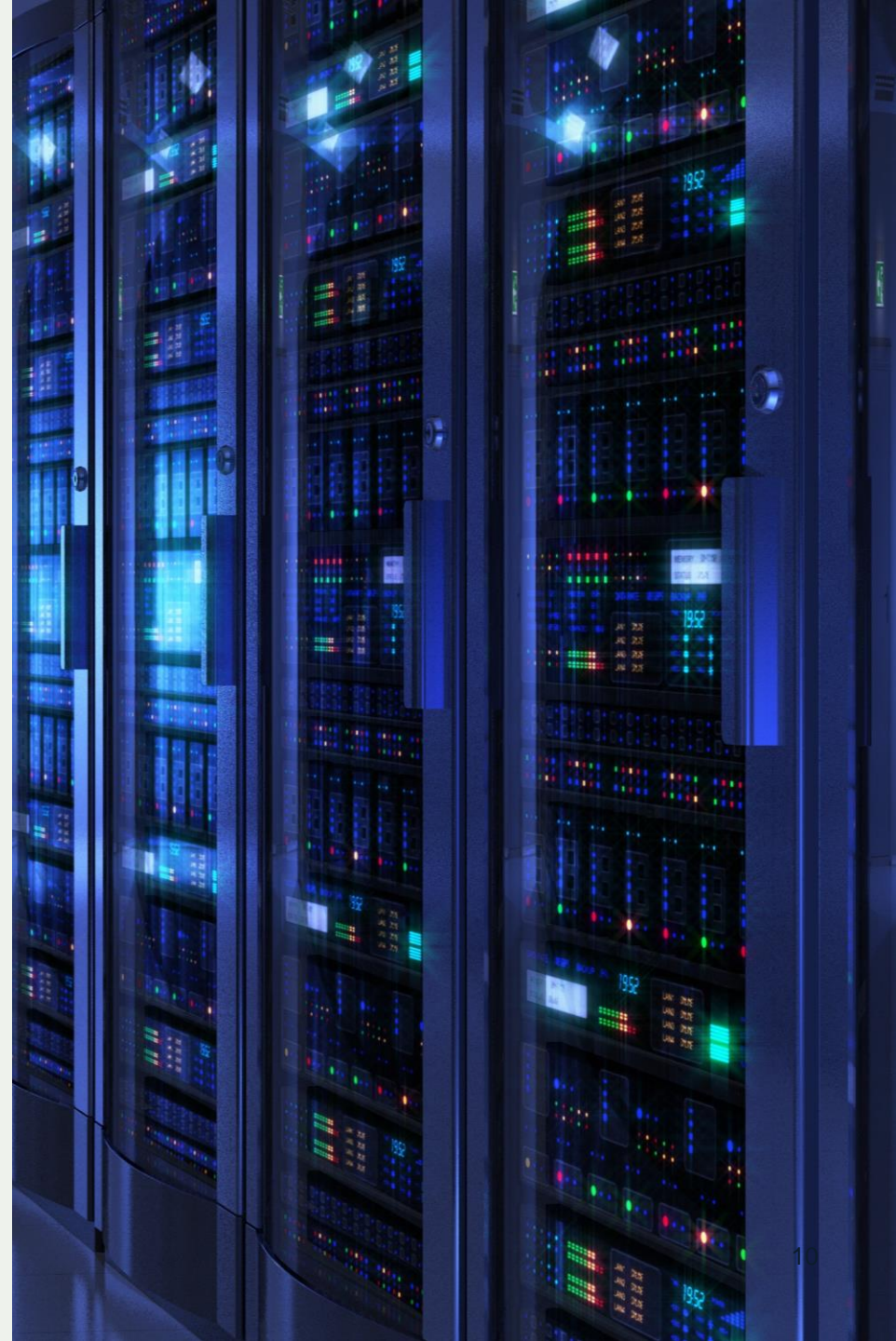
- Content blocking and filtering
- Intermediary liability
- These considerations may block access and create uncertainty leading to self-censorship

Monetisation is critical to fund content and platforms

- Even with app stores, there are relatively few countries where apps can be bought and only one where they can be sold
- Advertising can address challenges with direct payments, but has its own challenges with languages
- These challenges can also make it difficult to raise money for local content development, particularly with crowdfunding

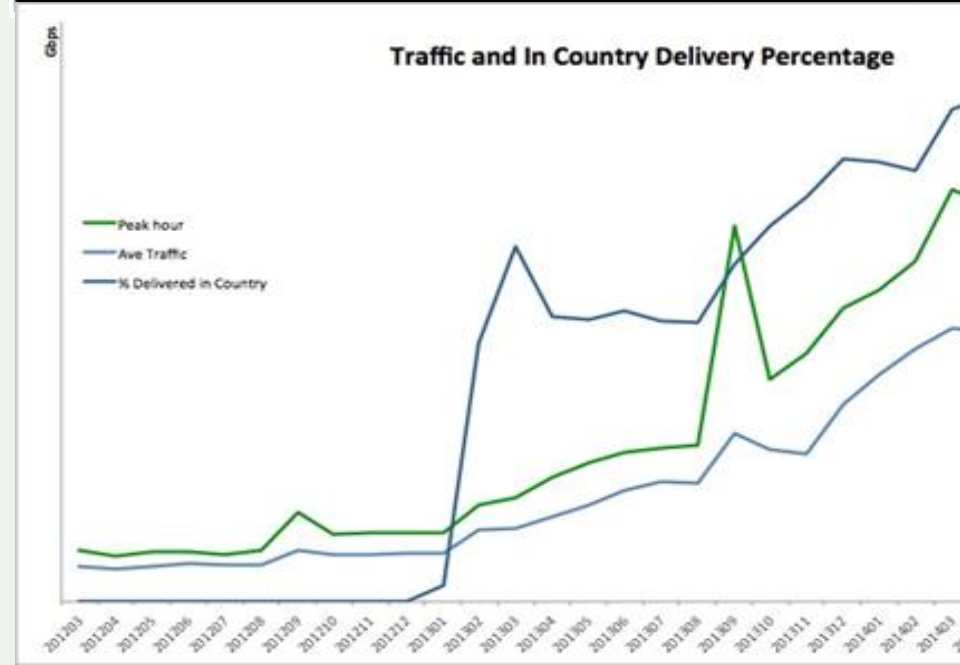
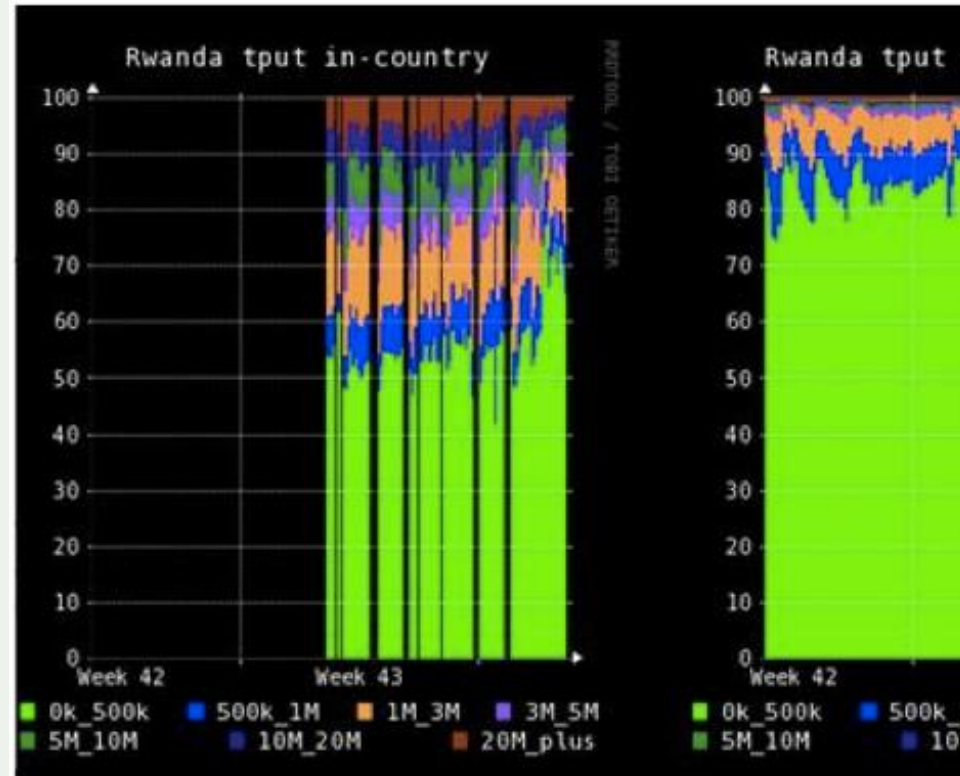
Relevant Content needs delivery

- Content must not just be available, but also locally accessible
- Content hosted abroad must be brought back over expensive international transit links that may be congested, every time it is viewed
- The increased latency decreases usage of the content
- Content infrastructure is required, including:
 - Data centers
 - Content delivery networks (global cache)
 - Local hosting provider
 - Internet eXchange Points



Akamai study

- Akamai place a server in Rwanda during a recent project
- Before: 90% below 500 kbps throughput
- After: 50% of users increased throughput above 500 kbps and 5% in excess of 20 Mbps
- Increased page views are key to convincing content developers to pay the extra cost of hosting locally
- With the improved performance, usage doubled within three months.



RW10K

Voluntary migration of 10k websites from US and Europe to Rwanda: Pilot results

Latency

Dropped from 300ms
to < 1ms

Page views

20% increase after 2
weeks

Adjacent possible

Exponentially greater
combinatory power:
more opportunities
for innovation

Repeat visits

Larger share of a
larger pie: More visits
and a greater
proportion of repeat
visits



Local content infrastructure is important to increase availability and usage

Data centers provide a place for content providers, ISPs, and IXPs to put their equipment, connect with each other and the rest of the Internet. Key issues include

- Competitive access providers
- An uninterrupted and reasonably priced power supply
- Skilled professionals to run the data center

CDNs used to deliver international content, and local hosting providers for smaller providers

An IXP to allow local traffic exchange between ISPs and content providers

Conclusions

Local content availability helps raise
Interest in online availability and usage

- Requires local languages, both to make content accessible and for advertising
- Clear legal frameworks for content restrictions and liability on providers and platforms
- Ability to buy and sell content domestically and internationally
- Particularly important to help promote local content development

Content infrastructure lower the cost
and latency of delivery

- A clear legal environment with regards to data center and CDN liability
- An IXP to promote local traffic exchange to benefit from local hosting
- Government can act as a key anchor tenant to provide demand for data centers and hosting
- Key to promoting a content ecosystem



Thank you.

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