RWANDA

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"Digital convergence opening doors for content services"

factfile

Population of the country: 9,907,509
Total Number of Internet connections: 20,000 (2002)
Total Number of Telephone lines: 800,000
Total number of Mobile connections/users: 520,000
Total number of universities: 14
Number of Individuals with Internet Access: 100,000
Number of broadband users: 1700 (2007)
Internet hosts in Rwanda: 2,363 (2008)
Percentage of literacy: 48%
Percentage of educated population: 70%

Sources:
http://www.indexmundi.com/rwanda/internet_users.html
http://www.internetworldstats.com/africa.htm#rw
http://www.tradeport.org/countries/rwanda/01grw.html
http://www.csmonitor.com/2007/1017/p01s02-woaf.html

How would you define the meaning of e-Content in your country in terms of its true meaning and practical implication?

E-content in our context is understood to mean software applications and multimedia products accessed online or locally available by use of electronic devices, like a computer, mobile devices, etc that effectively and creatively work with quality contents, integrated with the best use of ICT. Essentially, it includes electronic information repositories (online as well as offline), e-applications and services (e.g. e-agriculture, e-health, e-tourism, e-commerce, etc).

5 pillars

of e-Content development in Rwanda

- Human capacity development
- Infrastructure
- Sufficient bandwidth capacity
- Tax exemptions on ICT equipment and services
- National e-content competition

Q What is the current status of e-Content in your country - across all industry and aspects?

The e-Content development in Rwanda has just started. ICT being on the forefront of government's top priorities, increasingly more and more firms take advantage of the conducive environment to engage in the industry.

Q What area of e-Content is best developed in your country? For example, e-health, e-biz, e-culture, e-gov, e-entertainment, e-learning, e-science, or e-inclusion.

Based on the current status, e-health and e-biz have shown outstanding impact as of now. The TRACNet information system, for example, designed to collect, store, retrieve, display, and disseminate critical program information, drug distribution, and patient information related to the care and treatment of HIV and AIDS has helped the sharing of information on the status of pandemic at a very simple, practical level.

Q Which sector in your country is more aggressive in developing e-content? business or private sector; government or civil society?

The e-content has been aggressively developed by both private and public sector. Indeed, government strongly encourages private sector to lead in the field, even though being a young economy only emerging from turmoil of a ghastly genocide in which more than 10% (about 1 million people) lost their lives, the public sector has traditionally been the major 'consumer' and thus promoter of e-content. However, the nascent private sector, particularly the small to medium industries, are fast closing in.

Q How would you describe the gradual progress of development of e-content in your country in terms of its rise? Any timelines?

Considering the government's commitment and prioritization of the ICT sector as a major driving engine for national socio-economic and cultural development, e-content development is fast taking centre-stage in Rwanda.

Q Can you list the major initiatives, which influenced and aggravated the development of e-content in your country?

Having been the first Sub-Sahara African country to develop, implement, evaluate, and review a structured 5-year national ICT Plan, Rwanda's development agenda commonly known as "Vision 2020" which aims at transforming Rwanda into an information-rich, knowledge-based society and economy by the year 2020, the eminent rise of e-content development is not surprising. ICT is recognized as being an accelerator and driving engine for the attainment of that global objective.

The Government of Rwanda has identified ICT as an enabler of socio-economic development and its prioritization has been reflected in a number of on-going key ICT projects and other sector-specific national programs.

The government put in place a comprehensive National Information and Communication Infrastructure (NICI) master plan that clearly outlines policies and plans for the development of the ICT sector. In the same document, E-content is identified as one of the 10 pillars that currently are being rolled out.

Furthermore, the government has foregone all taxes on ICT equipment and products imported from abroad to encourage local and foreign investors to start their businesses at affordable cost. This has greatly helped the growth and innovation within and among the ICT enterprises in Rwanda.

Q How would you describe the major bottlenecks on the path of e-content development in your country?

The major bottlenecks include:
>> Limited technical and management human capital,
>> Low bandwidth,
>> High cost of Internet connectivity,
>> Low level of awareness,
>> High cost of rolling out fiber cables countrywide that would at least lead to high volumes of data flow (and thus low costs);
>> Lack of enough infrastructure and uneven distribution of those few available.

Q In majority of the countries, e-Content development is significantly dependent on ICT infrastructure and ICT facilities. But, in some countries that are quite developed, ICT has become part of daily life and e-content development is primarily subjected to the initiatives of an individual/organization/government, etc. Whereas, in some countries, especially those, which are developing and under developed, e-content development is largely dependent on ICT infrastructure. What is the situation in your country? Please explain in detail.

The ICT infrastructure is important for any country's ICT sector development, Rwanda inclusive. Within the framework of fostering national ICT initiatives, the government considers the issue of ICT infrastructure as among the top priorities. Currently, there are national fiber optic roll-outs/exercises going on between the capital city, Kigali, and other provincial towns. On the list of the 10 pillars of the National Information and Communication Infrastructure (NICI), "Infrastructure development, Equipment and Content" distinctly stands out.

Q How would you describe the ICT scenario in your country? Please describe in terms of infrastructure, penetration, acceptance and policies.

The level of ICT penetration is still relatively low, with a tele-density of about 0.9%. The unit cost of communication in Rwanda is still one of the highest in the East African sub-region. However, concrete actions are already

underway to address some of these impediments.

Q Please explain which medium is the most preferred medium for e-content development? Print? Or TV? Or Internet/Web? Or Radio? Or Mobile/Wireless? Or a combination of some of these?

The most preferred medium of e-content development in Rwanda is Internet/Web. However, mobile applications developers have also taken some commendable efforts especially in call centers already operational in Kigali ICT Park. Nevertheless, due to its natural high penetration level, radio still remains the dominant e-content source and may do so for the foreseeable future.

Best Practices

E-BUSINESS

In the e-business category, SMS Media was nominated.
The SMS Media is a web-based system that allows customers throughout Rwanda to pay their utility bills using cash power cards of various denominations produced by SMS media Rwanda. Based on scratch card technology, a consumer will send an SMS message to the Electrogaz server with the meter serial number and validation number recorded on scratch the card. They will then almost instantly receive an SMS message with a 20-digit credit voucher for their bills. In awarding this product a TIGA Award by the UNECA, the judges commended this project for "innovation and delivering a service that all are yearning for."

E-GOVERNMENT

For the e-government category, the Rwanda Development Gateway (RDG) was nominated. RDG is a web-based portal for Government of Rwanda that is run by the National University of Rwanda (NUR). The RDG is implementing a Program to set up a National Portal as a platform for information sharing. The Portal represents a one-stop-shop for information on Rwanda and the country's web interface to the rest of the world.

The RDG aims at wealth creation, employment generation and poverty reduction by providing opportunities for knowledge sharing and networking among communities to drive the development agenda in a participatory way, basing on local priorities. This is in line with the government's "Vision 2020" that seeks for Rwanda a mid-income, knowledge-based economy status by the year 2020, and the resultant National Information and Communication Infrastructure (NICI) Policies and Plans.

E-HEALTH

Under the e-health category, TRACNet was nominated.
The Treatment and Research AIDS Center (TRAC) is an institution affiliated to the Ministry of Health and it implements a Health Management Information System christened Rwanda TRACNet. Rwanda TRACNet is a dynamic Information Technology solution designed to collect, store, retrieve, display, and disseminate critical program information, drug distribution, and patient information related to the care and treatment of HIV and AIDS.

The System has been fully operational for more than 24 months now, and is used by all the 134 health facilities currently offering Anti-Retroviral Therapy to People living with HIV and AIDS in Rwanda.

With a bilingual English and French telephone line with the IVR technology and web interface, TRACnet employs a practical and sustainable approach to using information technology. The Government of Rwanda and other stakeholders are presently exploring adopting the TRACNet technology for other similar applications in other sectors.