

CENTRAL AFRICA'S CONTRIBUTION TO CONNECT NEXT BILLION

CONTEXT

The disparity of problems about internet development in Central Africa is multifaceted and complex. This depends on the priorities of each country in the implementation of ICT policy, if it exists.

However, in the field of digital technology, it's not just the government as the sole actor. Telecoms, ISPs, technical community, academia and users alike are key players in this light.

It should be emphasized that the size of the infrastructure and standardization is a first group of subjects to standardize because it concerns the core issues, mainly technical, related to the functioning of the internet.

The first group includes the major issues without which the Internet and the World Wide Web (www) could not exist. These questions are grouped into three layers including: telecoms infrastructure, borrowed for any Internet traffic, technical standards and Internet services and infrastructure that ensures the functioning Internet (TCP / IP, DNS, SSL), content and standard applications (HTML, XML, etc ..). The second group includes issues related to safe and stable operation of the Internet infrastructure. They include cybersecurity, encryption, and spam.

When we take all these factors, we find that these crucial questions were not well understood by most policy makers to the extent that private telecom operators, ISPs etc .. advantage of this unstructured environment and even legally, administratively to develop their activities to detriment of users.

However, it should be noted that Africa has only 9.4% of users against 90.6% for the rest of the world (<http://www.internetworldstats.com/stats1.htm>).

INTERNET IN AFRICA

AFRICA 2016 POPULATION AND INTERNET USERS STATISTICS FOR 2016

AFRICA	Population (2016 Est.)	Internet Users 31-Dec-2000	Internet Users 30-Jun-2016	Penetration (% Population)	Internet % Africa	Facebook 15-Nov-2015
Algeria	40,263,711	50,000	11,000,000	27.3 %	3.3 %	11,000,000
Angola	20,172,332	30,000	5,951,453	29.5 %	1.8 %	3,300,000
Benin	10,741,458	15,000	1,232,940	11.5 %	0.4 %	570,000
Botswana	2,209,208	15,000	620,000	28.1 %	0.2 %	620,000
Burkina Faso	19,512,533	10,000	1,894,498	9.7 %	0.6 %	490,000
Burundi	11,099,298	3,000	526,372	4.7 %	0.2 %	340,000
Cabo Verde	553,432	8,000	224,183	40.5 %	0.1 %	190,000

Cameroon	24,360,803	20,000	4,311,178	17.7 %	1.3 %	1,400,000
Central African Rep.	5,507,257	1,500	224,432	4.1 %	0.1 %	61,000
Chad	11,852,462	1,000	387,063	3.3 %	0.1 %	200,000
Comoros	794,678	1,500	59,242	7.0 %	0.0 %	50,000
Congo	4,852,412	500	357,471	7.4 %	0.1 %	300,000
Congo, Dem. Rep.	81,331,050	500	3,101,210	3.8 %	0.9 %	1,900,000
Cote d'Ivoire	23,740,424	40,000	5,230,000	22.0 %	1.6 %	1,800,000
Djibouti	846,687	1,400	105,163	12.4 %	0.0 %	100,000
Egypt	90,067,793	450,000	33,300,000	37.0 %	10.0 %	27,000,000
Equatorial Guinea	759,451	500	181,657	23.9 %	0.1 %	52,000
Eritrea	6,674,489	5,000	67,000	1.0 %	0.0 %	67,000
Ethiopia	102,374,044	10,000	4,288,023	4.2 %	1.3 %	3,700,000
Gabon	1,738,541	15,000	670,197	38.5 %	0.2 %	360,000
Gambia	2,009,648	4,000	373,865	18.6 %	0.1 %	180,000
Ghana	26,908,262	30,000	7,958,675	29.6 %	2.4 %	2,900,000
Guinea	11,780,162	8,000	770,000	6.5 %	0.2 %	770,000
Guinea-Bissau	1,726,170	1,500	70,000	4.1 %	0.0 %	70,000
Kenya	45,925,301	200,000	31,985,048	69.6 %	9.7 %	5,000,000
Lesotho	1,947,701	4,000	250,000	12.8 %	0.1 %	250,000
Liberia	4,195,666	500	348,240	8.3 %	0.1 %	260,000
Libya	6,411,776	10,000	2,400,000	37.4 %	0.7 %	2,400,000
Madagascar	23,812,681	30,000	1,100,000	4.6 %	0.3 %	1,100,000

Malawi	17,715,075	15,000	1,080,620	6.1 %	0.3 %	700,000
Mali	16,955,536	18,800	1,186,888	7.0 %	0.4 %	770,000
Mauritania	3,596,702	5,000	455,553	12.7 %	0.1 %	250,000
Mauritius	1,339,827	87,000	803,896	60.0 %	0.2 %	580,000
Mayotte (FR)	220,300	n/a	107,940	49.0 %	0.0 %	49,000
Morocco	33,322,699	100,000	20,207,154	60.6 %	6.1 %	10,000,000
Mozambique	25,303,113	30,000	1,503,005	5.9 %	0.5 %	1,200,000
Namibia	2,212,307	30,000	470,000	21.2 %	0.1 %	470,000
Niger	18,045,729	5,000	351,892	2.0 %	0.1 %	230,000
Nigeria	181,562,056	200,000	92,699,924	51.1 %	28.0 %	15,000,000
Reunion (FR)	867,687	130,000	380,000	43.8 %	0.1 %	380,000
Rwanda	12,661,733	5,000	3,216,080	25.4 %	1.0 %	510,000
Saint Helena (UK)	4,513	n/a	1,800	39.9 %	0.0 %	1,500
Sao Tome & Principe	194,006	6,500	48,806	25.2 %	0.0 %	32,000
Senegal	13,975,834	40,000	7,260,000	51.9 %	2.2 %	1,700,000
Seychelles	92,430	6,000	50,220	54.3 %	0.0 %	39,000
Sierra Leone	5,879,098	5,000	260,000	4.4 %	0.1 %	260,000
Somalia	10,616,380	200	500,000	4.7 %	0.2 %	500,000
South Africa	54,777,809	2,400,000	26,841,126	49.0 %	8.1 %	13,000,000
South Sudan	12,042,910	n/a	1,914,823	15.9 %	0.6 %	150,000
Sudan	36,108,853	30,000	9,307,189	25.8 %	2.8 %	n/a
Swaziland	1,435,613	10,000	389,051	27.1 %	0.1 %	160,000

Tanzania	51,045,882	115,000	7,590,794	14.9 %	2.3 %	2,700,000
Togo	7,552,318	100,000	430,482	5.7 %	0.1 %	280,000
Tunisia	11,037,225	100,000	5,408,240	49.0 %	1.6 %	5,200,000
Uganda	37,101,745	40,000	11,924,927	32.1 %	3.6 %	1,800,000
Western Sahara	554,795	n/a	27,000	4.9 %	0.0 %	27,000
Zambia	15,066,266	20,000	2,711,928	18.0 %	0.8 %	1,300,000
Zimbabwe	14,229,541	50,000	6,759,032	47.5 %	2.0 %	850,000
TOTAL AFRICA	1,158,355,663	4,514,400	330,965,359	28.6 %	100.0 %	124,568,500

SOURCE:<http://www.internetworldstats.com/stats1.htm>

PENETRATION OF MOBILE TELEPHONY IN AFRICA

Between 2011 and 2015 the number of mobile telephony in Africa rose from 500 million to 850 million. According AfricTelegraph newspaper that reveals information, mobile telephony has experienced a breakthrough on the continent in the last 14 years from less than 10% in 2002 to over 50% today, with peaks as in Africa South where the rate reaches 89% (a rate equal to that of the United States). Growth that has foiled all initial forecasts of the different organizations.

This growth leads to an inclusion of financial services and especially mobile banking. In 2015, the number of mobile banking users in Africa was valued at nearly 100 million users. About 12% of adults would hold in sub-Saharan Africa, a mobile bank account that is not linked to any traditional bank account.

The newspaper also reveals that with more than 700 million SIM cards on the continent, and a quarter of carriers that gradually access to 3G and 4G speeds, the African continent remains the most dynamic region in the world with nearly 10 billion dollar investments made by African operators in 2014.

But if the mobile phone is a leader in Africa, with growth in subscribers, there is a reduction in the marginal level of profitability per subscriber, reaching less than five dollars a month in many markets. A fact justified by the increased competition, which actually increases the risk of negative investment returns of the operators, and does not promote consolidation in the long term.

The World Bank has just published its report on global development in 2016 entitled "Digital Dividends". Regarding the Information Technology sector and communication, the Bank believes that advances in this sector should strengthen ties between Africa and the world markets. The report finds that the number of people who now have access to mobile telephony services is over 60%.

"Currently, over 60% of sub-Saharan African population has access to a mobile phone. The opportunity for retailers to reach new customers in the region is changing as the adoption of mobile technology and accessibility to the internet are developing in these countries," says Hennie Heymans, CEO of DHL SSA Express quoted in the report.

Onn also notes that "increased access to digital technologies brings more choice and convenience, and thanks to the inclusion, efficiency and innovation, access to mobile networks offers opportunities that were previously out of reach."

According to the World Bank, growth in the number of phones and mobile services instantly transported numerous African in the digital era by connecting to services and knowledge worldwide. Since then, its middle class is experiencing one of the fastest growing in the world and saw various opportunities emerge from this

growth.

WHAT ARE THE INITIATIVES FOR SUSTAINABLE DEVELOPMENT?

Far from being able to give a comprehensive information for Central Africa in various initiatives.

In Cameroon, we can cite the *CEFEPROD*¹ (*Female Centre for Development Promotion*) that is deeply involved in the women's capacity to use and manage digital technology. I can cite as *PROTEGE QV*² (<http://www.protegeqv.org/>) which is developing a program entitled "Promotion of technology, guarantee the environment and quality of life." The program is broken down into four components: development of ICT, micro-enterprises, urban agriculture and local leadership.

In Congo Brazzaville, *AZUR Development*³, an association of women that started its activities in 2003 on the initiative of a group of young women motivated to improve the status of women and children. AZUR Development is today an organization active in nine departments of the country and involved in regional actions. In Congo, we cover the departments of Brazzaville, Bouenza, Cuvette, Kouilou, Lékoumou, Likouala, Niari, Pointe-Noire and the Pool. The objectives AZUR DEV. are to promote the empowerment of women, provide multifaceted assistance to women, girls and vulnerable and their families, to work for the protection of the environment.

In Democratic Republic of Congo, *SI JEUNESSE SAVAIT*⁴ (SJS) promotes the leadership of women and the girl. Within SJS, leadership takes a feminist angle. SJS and wants to work for a society where young Congolese woman can exercise leadership in their social and political environment. For this, the young Congolese woman must improve the knowledge of his own personality. Similarly, only consolidate his personal qualities as part of a full confidence in his own abilities. To achieve a good exercise leadership. SJS does not neglect the social context of young Congolese woman. Context in which it not only is not educated to exercise leadership it is capable. But when all eyes and words that require him to live very privately. The stone SJS adds to the building is not only the fact raise awareness and make society accept or realize that leadership can exercise the young woman especially in the public areas. She is also very active participatory. The association organizes training related to leadership and the strengthening of the young woman called capacity to exercise it.

African Centre for Cultural Exchange, in French *Centre Africain d'Echange Culturel*⁵ (CAFEC), develops centers for access to information for the benefit of regional and local entities in pilot phase in 9 towns of the city province of Kinshasa. In the same vein, CAFEC also initiated the creation of websites of these authorities decentralized entities to enable administrators and administered regularly have the right information.

A similar project was also initiated for visibility on the worldwide web of ethnic groups, tribes and their geolocation (project under negotiation). The visibility on the World Wide Web requires good DNS policy at national level.

In Chad, Association "*Citizen Action for Information and Education for Sustainable Development* (ACIEDD)" was created in order to meet the objectives of Sustainable Development (ODD) by taking action Awareness-Raising Awareness of training to youth and vulnerable populations to instill the knowledge, expertise and knowledge to be in order to achieve sustainable development in Chad and therefore of the whole of Africa.

More information <http://www.aciedd.org/>

The *Association for the Education Action and the Advancement of Women* (AEPF) work for the rights of

1 <http://www.cefeprod.net/>

2 <http://www.protegeqv.org/>

3 <http://www.azurdev.org/> - <http://azurweb.blogspot.com/> - <https://www.flickr.com/photos/azurcongo/page1>

4 <http://mwasi.com/leadership/>

5 https://www.facebook.com/Centre-Africain-Dechange-Culturel-CAFEC-263991710446697/photos_stream

children and women and their welfare. The well being of women affects the family and society. The actions for the promotion of women are many and varied.

We can mention among other actions: rescue people in needy circumstances (no schooling, forced marriage and early, lack of funds for commendable work, unwed mother whose continuing education ...); interest girls in the New Information and Communication Technologies, training and openness and the world; create a structure to promote distance learning (Internet); identify training centers and inform girls; guide and support the girls' development initiatives; advise, encourage and support girls to pursue graduate or professional studies; promote the training of members of the Project Management Association officials; educate parents on the merits of sending girls to school and let them pursue higher education; organize Human Training for girls: Education for Life and Love (EVA) to avoid surprises of life ; take any action affecting children since they concern for their mother (woman); conduct any activity within the alleviation of women's work; develop among men and groups of men the potential of a fulfilled woman and simultaneously arouse in them positive actions in favor of women; mobilize individual and collective strengths, local and international in the pay of all women and children worldwide.

" Ask an action in favor of women is watering a fruit tree "

More information <http://www.associationaepf-tchad.com/427258088>

WenakLabs is a Chadian association for web players, journalists, writers, doctors ... who share a passion for ICT (Information Technology and Communication) and social innovation.

More on <http://wenaklabs.org/>

The **Chadian Association for the Promotion and Development of the Internet in Chad** (ATPDIT) is a non-profit organization with headquarters in N'Djamena, Chad. ATPDIT is the Chadian branch of the Internet Society has been recognized as ISOC-Chad in 2008, the association was founded to overcome the under-participation of Chadians to the Global Internet Governance and contribute to open development of the Internet in Chad.

Objectives of the ATPDIT (ISOC-Chad Chapter) are:

- * To promote and develop the Internet in Chad.
- * To promote and assist in the implementation of broadcasting sites and information in Chad
- * To popularize Internet use on the extent of the Chadian national territory based on experiences and providing a first level of information;
- * To encourage the Chadian involvement in the work of ISOC and all types of projects cooperative;
- * Regularly organize training sessions for all levels of the single user Internet network manager.
- * To promote cooperation with other ISOC Chapters.

More on <http://www.isoc.td/>