

# African Regional Case of E-Government

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## INTRODUCTION

New developments in information and communication technologies (ICTs) over the past few decades, especially the establishment of the World Wide Web in the early 1990s, have created an unprecedented capacity for people to access and retrieve information on the Internet. Such developments have also affected the way public institutions, particularly governments, provide services to their citizens in addressing the challenges of improving government efficiency, effectiveness, transparency and accountability (Allen, Juillet, Pacquet, & Roy, 2001; Allen, Juillet, Miles, Paquet, Roy, & Wilkins, 2004; Holliday, 2002; La Porte, Demchak, de Jong, 2002; UN, 2004). In addressing these challenges, applications of ICTs have been considered as one of key components in the various public sector reforms, and to some extent associated with the coining of “reinventing government” (Heeks, 2001; Ho, 2002). Thus, by the late 1990s many governments were already delivering Web-based services as “an integral and significant part of a new ‘e-government’” (Ho, 2002, p. 434).

All over the world, therefore, countries and states are at the various stages of implementing e-government or digital government to improve delivery of government services to their citizens and at the same time to provide increased avenues for direct participation of citizens in addressing with their governments the citizens’ development needs. In general, in all respects of implementing e-government strategies, developed countries are far ahead of developing countries (Basu, 2004; La Porte et al., 2002; Nath, 2003; Netchaeva, 2002; Singh & Naidoo, 2005; UN, 2001, 2002, 2004) due to a number of reasons that will be highlighted later in this chapter.

## E-GOVERNMENT IMPLEMENTATION IN AFRICA

Many African countries are also e-government players at different levels of e-government development (Heeks, 2002; Kaaya, 2004; Mutula, 2002; Panagopoulos, 2004; Singh & Naidoo, 2005; UN, 2004). They have presumably been driven by current social, economic, political, and technological conditions—including public sector re-

form programs that were tied to structural adjustment programs—to adopt the strategies (Benjamin, 2001; Cain, 2001; Heeks, 2002). Or else, these countries were motivated by benefits that other already-implementing countries have reported, such as greater and more direct interactions with their citizens and business community (Allen et al., 2001; Silcock, 2001; Stowers, 2004; UN, 2001, 2004), enhancement of civil democratic participation (Garson, 2004; Netchaeva, 2002; Panagopoulos, 2004; Silcock, 2001), possible savings in terms of service running costs and time due to speedy processes (Garson, 2004; Heeks, 2002; Whitson & Davis, 2001), improved government accountability (Alan et al., 2004; Cook, La Vigne, Pagano, Dawes, & Pardo, 2002; La Porte, et al., 2002), and the promise of more access (Garson, 2004).

Conversely, these motivating factors might not be sufficiently attractive to some African circles, as they wouldn’t like to see changes to the status quo. Moreover, Heeks (2002) argues that the issue of cost savings might not hold water in Africa because salaries of the civil servants in that region are so low that it might be more costly to invest in ICTs than maintaining cheap personnel to perform various government tasks. This is contrary to the situation of developed countries where replacing costly government staff with relatively cheap ICTs might seem more attractive. But levels of African e-government participation in terms of Web content and access are closely associated with the use of the Internet and related infrastructure (For statistics about telecommunication infrastructure in Africa—including telephone lines, ISPs, bandwidth capacities, and so forth—see the UNDP’s World Development Reports at <http://hdr.undp.org/> and Jensen’s Report at <http://www3.sn.apc.org/africa/afstat.htm>). Therefore, it is important to get the general picture of Internet usage in Africa before dwelling on the situation of e-government services.

According to the latest estimates from the Internet World Stats (2004), there are 12,937,100 Internet users in Africa. These figures represent only 1.4% of the continent’s population, indicating low penetration level. The number of users in Africa represents 1.6% of the world’s users even though the continent’s population represents 14% of the world’s population. However, Internet use growth between years 2000 and 2004 was 186.6% compared to the world’s use growth of 125.2%;

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Table 1. Number of Internet users in Africa in comparison with other world's regions (Internet World Stats, 2004)

| Region                      | Population (2004 est.) | % of World Population | Internet Users (2004) | % Use Growth (2000-2004) | Penetration (% Population) | % Users in the World |
|-----------------------------|------------------------|-----------------------|-----------------------|--------------------------|----------------------------|----------------------|
| Africa                      | 893,197,200            | 14.0                  | 12,937,100            | 186.6                    | 1.4                        | 1.6                  |
| Asia                        | 3,607,499,800          | 56.5                  | 257,898,314           | 125.6                    | 7.1                        | 31.7                 |
| Europe                      | 730,894,078            | 11.4                  | 230,886,424           | 124.0                    | 31.6                       | 28.4                 |
| Latin America and Caribbean | 541,775,800            | 8.5                   | 55,930,974            | 209.5                    | 10.3                       | 6.9                  |
| Middle East                 | 258,993,600            | 4.1                   | 17,325,900            | 227.8                    | 6.7                        | 2.1                  |
| North America               | 325,246,100            | 5.1                   | 222,165,659           | 105.5                    | 68.3                       | 27.3                 |
| Oceania                     | 32,540,909             | 0.5                   | 15,787,221            | 107.2                    | 48.5                       | 1.9                  |
| World                       | 6,390,147,487          | 100.0                 | 812,931,592           | 125.2                    | 12.7                       | 100.0                |

Table 2. Top ten countries in Africa in terms of number of Internet users (Internet World Stats, 2004)

| Country       | Population (04 est.) | Internet Users 2000 | Internet Users 2004 | % Use Growth (2000-2004) | Penetration (% Population) | (%) Users in Africa |
|---------------|----------------------|---------------------|---------------------|--------------------------|----------------------------|---------------------|
| South Africa  | 47,556,900           | 2,400,000           | 3,523,000           | 46.8                     | 7.4                        | 27.2                |
| Egypt         | 68,648,500           | 450,000             | 2,700,000           | 500.0                    | 3.9                        | 20.9                |
| Morocco       | 30,552,000           | 100,000             | 800,000             | 700.0                    | 2.6                        | 6.2                 |
| Nigeria       | 154,491,100          | 200,000             | 750,000             | 275.0                    | 0.5                        | 5.8                 |
| Tunisia       | 10,001,400           | 100,000             | 630,000             | 530.0                    | 6.3                        | 4.9                 |
| Zimbabwe      | 14,712,000           | 50,000              | 500,000             | 900.0                    | 3.4                        | 3.9                 |
| Algeria       | 32,080,000           | 50,000              | 500,000             | 900.0                    | 1.6                        | 3.9                 |
| Kenya         | 33,520,700           | 200,000             | 400,000             | 100.0                    | 1.2                        | 3.1                 |
| Tanzania      | 36,581,300           | 115,000             | 250,000             | 117.4                    | 0.7                        | 1.9                 |
| Cote d'Ivoire | 18,946,700           | 40,000              | 240,000             | 500.0                    | 1.3                        | 1.9                 |

this shows that Africa is far from reaching the critical point of Internet penetration. Table 1 compares these figures with those of other world regions.

From the data, Africa is far behind all other regions whether in terms of total number of users or Internet penetration, or even the continent's contribution to the number of users in the world. The world's average Internet penetration is nine times that of Africa. Within the continent itself, South Africa has the largest number of Internet users, but its penetration of 7.4% is far below the world's average of 12.7%. Table 2 shows top ten African countries in terms of Internet usage (including North African Arabic countries).

Internet penetration figures (Table 3) provide a clearer picture of the situation, since the order of countries by total numbers of users (Table 2) tends to favor countries

with relatively high population. A good example is Nigeria with 750,000 Internet users but its Internet penetration is only 0.5%, which is about one-third of Africa's average. Seychelles, which does not feature among top ten countries in terms of the Internet usage numbers, has the highest penetration in the continent (14.1% of the population has access to the Internet). Thus, if the countries are rearranged according to their levels of Internet penetration instead of the total number of users, then the top ten list is altered as shown in Table 3 (excludes colonies). Only Seychelles is above the world's average by 1.4 percentage points.

These figures, which The Internet World Stats obtained from a variety of sources, provide the general picture of Internet usage in Africa. It is hard to obtain precise figures in Africa due to the nature of usage in

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