

# ICT4D

**Sherif H. Kamel**

*The American University in Cairo, Egypt*

## INTRODUCTION

Information and communication technology for development (ICT4D) has been evolving for three decades realizing business and socioeconomic development and growth and capitalizing on channels for information acquisition and knowledge dissemination allowing the creation of an emerging global information-based society with innovative means of communication that can help increase competitiveness for individuals, organizations and societies. ICT tools and applications could be used as an effective platform to minimize the digital divide and promote social inclusion. The transformation process enabled through ICT is affecting different aspects of the economy and is forcing governments to rethink the way they handle their socioeconomic challenges as they move forward in their development paths. This article addresses some of the initiatives in Africa to minimize the intra and inter digital divide, and join actively the global information society by building its own information society. Many African nations have invested heavily in building their ICT infrastructure with its different building blocks to help improve the readiness of their communities and smoothly integrate in the global digital world.

## BACKGROUND

During the recent few decades, ICT tools and applications have transformed the way people live, work, study, and play and get entertained amongst other daily routines. The global ICT sector is currently a significant sector in its own right accounting for up to 7.5% of worldwide gross domestic product. ICT has not only changed the world, but it has also increased its potential (Figueres, 2003). Emerging and innovative ICT coupled with globalization and the role of societal norms, values and cultures is constantly affecting societies around the world. It is forcing organizations and corporations

to rethink and reengineer the way they manage their operations and resources and face competition both locally and globally. Moreover, it is fair to claim that the processes of globalization are increasingly depending on ICT (Musa, 2006). This situation has generated new forms and structures of economic, business and social organizations that are no longer affected by geographic or time constraints but depend mainly on teleworking, telecommuting and overcoming barriers of time and distance which is emerging as the platform for business and socioeconomic development in the 21<sup>st</sup> century. ICT has the potential, given proper infrastructure in place, trained skilled human resources and timely infostructure, to improve the balance in economic and social progress, increase growth of the economy, boost the capacity to face societal challenges, enhance progress of democratic values and augment cultural creativity, traditions and identities.

During the 1990s, there was an unprecedented link between the technological innovation process and the economic and social organizations. Moreover, as the links between economic development, productivity and the availability of information resources became invaluable, governments around the world started to invest heavily in building their national information infrastructure (Petrazzini & Harindranath, 1997). This led to major changes and transformations in the activities and relationships of individuals and organizations within the society, leading to the evolution of the information society, where the services provided by ICT represent a set of challenges and opportunities for the global society. However, it is important to note that, although access to ICT is a prerequisite to its use, individual differences in time and space as well as capabilities and choice may play a role on the use, value and application of ICT (Alampay et al., 2003).

In today's global environment, it is becoming easier within the context of business and socioeconomic development and growth to identify and evaluate as well as compete across all sectors and industries using

DOI: 10.4018/978-1-4666-5888-2.ch391

the wealth of information and knowledge that are disseminated through global information networks. The ICT infrastructure makes information more accessible with more benefits to the society (Shapiro & Varian, 1999), which puts more pressure on firms around the world to exploit all possible opportunities to leverage productivity and efficiency. Businesses are increasingly becoming more aware of the vitality of ICT to stay competitive, with other global implications to productivity, employment and profits to the extent that organizational operations are becoming unthinkable without the effective and efficient use of ICT, especially in a global society, where information travels across national boundaries (Branscomb, 1994). Therefore, many developing nations including African nations have taken concrete measures in restructuring their ICT policies as part of their overall national strategies for development. This has resulted in having the number of mobile phones subscriptions growing twice as fast as that of the world during the period 2003-2008.

The policies introduced included deregulation, encouraging private investment and foreign direct investment (FDI), and the use of tools such as public private partnerships. ICT is an opportunity for the developing world such as the African continent because it is a powerful tool for economic growth, social inclusion and poverty eradication, which can facilitate the integration of African nations into the emerging, digital global marketplace (Annan, 2003). Africa stands to gain a great deal from participating in the globally connected economy; however, it must first establish the necessary ICT infrastructure, and restructure government processes and avail suitable economic conditions to attract and maintain an effective position in the global economy (Ajayi, 2004; Akinola et al., 2012). One decade into the 21<sup>st</sup> century, the world is becoming smaller and the public is rapidly gaining access to emerging ICTs (Shapiro & Varian, 1999). The information society is becoming a global force and a fundamental element of change in the global society (Garito, 1996).

Investment in the ICT sector is perceived to have the ability to improve the lives of people with low income who have limited access to services such as healthcare and education (Qureshi, 2007). Moreover, ICT holds the promise of development and growth by connecting people across the world irrespective of their background, location or cultural setting to more accurate and timely sources of information and

knowledge (Ahmed, 2007a) and Africa should be at the center stage of that development given that still in the majority of African countries, less than 5% of the population use the Internet resulting in the fact that most African countries have an Internet penetration equal to or below 11% as compared to the global average of 23%.

## ICT FOR DEVELOPMENT IN AFRICA

Since the early years of the 21<sup>st</sup> century, there has been a high-level commitment from African leaders to bring about change in the way ICT is perceived as part of the Africa's infrastructure boom. The commitments were declared following the meetings of the World Summit on the Information Society (WSIS) in Geneva in 2003 and Tunis in 2005. Today, African leaders are more into the information age and they are more prepared than ever to initiate new ideas, formulate a vision, set the strategy and support it throughout the implementation phases. It is perceived that such a trend represents a unique opportunity for Africa's younger and growing generations to adapt and adopt new tools and techniques using state-of-the-art ICT.

The indicators demonstrate that the African ICT market is gradually rising with huge potentials to have positive implications on different economies. Given the size of the African continent, there is a huge demand for ICT that needs to be satisfied effectively in order to ensure effective participation of African nations in the global information society. In today's growing and fast changing marketplace, it is broadly believed that universal access to ICT through broadband and access can contribute to economic development supported by governments, the private sector and the civil society. However, despite the developments in the ICT sector in Africa over the last few years, there are still a number of challenges to overcome before the continent is fully connected. The focus in the coming period should be mainly on the underprivileged communities and the rural areas. Moreover, ICT prices remain high and are unaffordable by the majority of the population who live in one of the poorest regions in the world.

While teledensity in Africa and especially in Sub-Saharan Africa is rather low, teledensity in rural areas is very limited. The gap between urban and rural areas in terms of telecommunication access is

7 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/ict4d/112839](http://www.igi-global.com/chapter/ict4d/112839)

## Related Content

---

### Reasoning on vague ontologies using rough set theory

( ). *International Journal of Rough Sets and Data Analysis* (pp. 0-0).

[www.irma-international.org/article/288522](http://www.irma-international.org/article/288522)

### A Framework for Understanding Information Technology as Ecology

Andrew Basden (2008). *Philosophical Frameworks for Understanding Information Systems* (pp. 309-337).

[www.irma-international.org/chapter/framework-understanding-information-technology-ecology/28086](http://www.irma-international.org/chapter/framework-understanding-information-technology-ecology/28086)

### A Framework for Assessing the Quality of Online Computer Programming Courses

Waleed Faragand Sanwar Ali (2015). *Encyclopedia of Information Science and Technology, Third Edition* (pp. 1171-1181).

[www.irma-international.org/chapter/a-framework-for-assessing-the-quality-of-online-computer-programming-courses/112513](http://www.irma-international.org/chapter/a-framework-for-assessing-the-quality-of-online-computer-programming-courses/112513)

### Addressing Team Dynamics in Virtual Teams: The Role of Soft Systems

Frank Stowelland Shavindrie Cooray (2016). *International Journal of Information Technologies and Systems Approach* (pp. 32-53).

[www.irma-international.org/article/addressing-team-dynamics-in-virtual-teams/144306](http://www.irma-international.org/article/addressing-team-dynamics-in-virtual-teams/144306)

### A Domain Specific Modeling Language for Enterprise Application Development

Bahman Zamaniand Shiva Rasoulzadeh (2018). *International Journal of Information Technologies and Systems Approach* (pp. 51-70).

[www.irma-international.org/article/a-domain-specific-modeling-language-for-enterprise-application-development/204603](http://www.irma-international.org/article/a-domain-specific-modeling-language-for-enterprise-application-development/204603)