

## **Chapter 3**

# **Information and Communication Technologies: Expectations of African communities**

One of the major development challenges confronting Africa is to develop the capacities, strategies, and mechanisms necessary to take full advantage of the opportunities offered by ICTs for development. Given the potential for ICTs to induce changes, many development analysts believe that these instruments can play an important role in the development process. In Africa, development theorists anticipate significant changes, particularly within the fabric of communities. These expectations are generally based only on changes observed in economically more advanced (usually Western) societies, but are not generally supported by facts.

The purpose of this chapter is to demonstrate what African communities expect from ICTs. Examples are given of attempts to introduce and use ICTs in African communities. The effects or changes that actual and potential users of ICTs expect to see in their own communities are described. In addition, community views on the anticipated usefulness of ICTs for improving their living conditions are discussed. This chapter synthesizes the observations reported in several research-action projects supported by Acacia in Kenya, Senegal, South Africa, and Uganda. These projects were centred on concrete uses and applications of ICTs in community development rather than on connectivity.

## **Expectations expressed by individuals**

Information and Communication Technologies (ICTs) give rise to many expectations among the communities surveyed. The hope suggests that an awareness of the role that ICT instruments can play in economic and social development is emerging. The effects or changes that individuals expect from ICTs are quite varied (Figure 1). In general, individuals plan to apply ICTs to their main areas of activity for their own development. As a rule, users (actual or potential) expect the use of ICTs to make positive changes in their jobs, education, health, agriculture, and environment. In communities that the Acacia-supported projects studied, the inhabitants were mostly active in agriculture, small businesses, and the service sector, and the effects they expected from ICTs revolved mainly around these activities.

### **Production activities**

Information and Communication Technologies (ICTs) should facilitate business development through improved access to information on product prices (inputs and outputs), on markets, and on various other resources. Therefore, in agriculture, African farmers expect ICTs to facilitate access to: high-yielding varieties at competitive prices; input suppliers; credit institutions; and information on how to improve their farming practices to increase yield. For example, farmers in the Ross Béthio region of Senegal expect ICTs to provide access to new knowledge on irrigation techniques and rice varieties for irrigated farming because they would like to shift to cash crops, which earn better economic returns. In Uganda, although the people in Rubaya and the East and Central African highlands have not yet started to use the new ICTs, they hope to gain access to information and knowledge that would enable them to improve their agricultural production techniques and their income.

### **Trade**

With regard to time management, ICTs can facilitate communication and reduce the time needed for transactions. This aspect is much talked about in the rural areas. In the main production areas, producers, in the absence of any information on prices and potential outlets (notably, on the local markets), are often at the mercy of intermediaries (who generally do not add any significant value to the production chain). The entrepreneurs using the

services of Trade Point (TPS) in Senegal hope to meet new partners with whom they could set up large-scale farming and gain new markets for their produce. This would help them overcome constraints related to the narrowness of the local market in their farming area. Women entrepreneurs in the Buwama and Kampala regions of Uganda hoped that ICTs would give them access to information that would help them improve the financial position of their businesses (Table 9) (CEEWA 2001).

**Table 9:** Potential role of ICTs according to women entrepreneurs in Uganda

Perception	Percentage
Time saving	15.9
Search for outlets	14.5
Information on trade	14.5
Communication with suppliers and customers	40.7
Cost savings	4.3
No answer	10.1
Total	100.0

Source: 'Consolidated report on monitoring women entrepreneurs in the CEEWA project sites (Nabweru, Buwama, and Kampala),' May 2001.

## Education and research

In education, students and teachers expected ICTs to improve their learning and teaching methods. They also hoped that they would have access to information that would help them enhance their classes and facilitate preparations for school exams. ICTs can boost research and assist in acquiring new knowledge. In Senegal, this potential raised great expectations among the educationists, and agriculture extension service workers, who settled in the rural areas to train farmers for companies such as SAED in Saint-Louis. So far, ICTs have not been used much as a way of acquiring new knowledge. The inadequacy of local content and limited access to ICTs constitute very serious problems.

## **Health**

ICTs should make it possible to have access to information that would help improve preventive health education. This expectation is anticipated by health workers, notably in the region of Tambacounda in Senegal, which are land-locked and are often affected by recurrent epidemics of flu, malaria, and diarrhoea. The use of a computer warning system based on systematic data collection might be able to sharply reduce both mother and child mortality rates.

## **Social communication**

As a facilitator of communication, ICTs could be able to contribute to bringing scattered members of the same family closer together (the creation and maintenance of a virtual community). This important effect is expected most notably in Uganda (Table 10). In land-locked regions like Podor and Matam in Senegal, known for their high migration levels, the inhabitants believe that ICTs (email and telephone) can contribute to minimizing transport costs, facilitating communication, and improving social life. This aspect is very important in the specific case of poor communities with relatively low incomes and high communication needs.

## **Women**

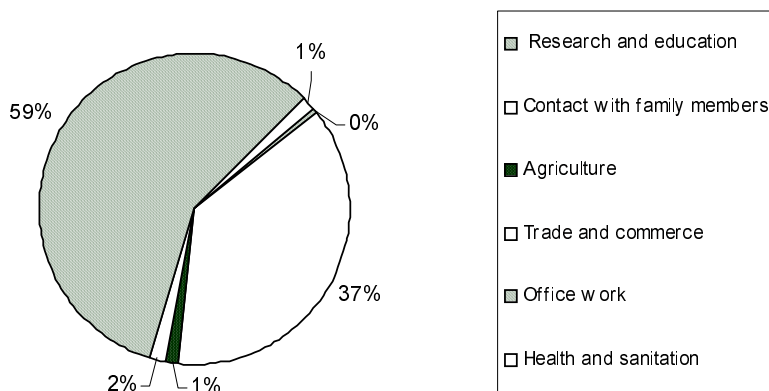
Women seem to be less able to express the effects they want from ICTs. The majority feel that these “instruments are not made for them.” This situation posed a problem within the Acacia program because women (along with youth) constituted one of the main target groups. A few women surveyed in Senegal seek information related to health, land ownership, and easy access to credit (Table 11).

## **Youth**

Young people were very active in cultural and sports associations and most of them expressed the need to have access to support structures for their association. For example, they were looking for ways to reinforce their capacity for intervention and to obtain information on ways to cooperate with other groups. Students wanted access to pedagogic resources and

information on scholarships, school exams, competitions, and vocational opportunities.

**Figure 1:** Potential uses of ICTs by individuals in Uganda



Source: Etta et al., 'Inquiries and questionnaires, ICTs and Community Development Study, Uganda, November 2000,' (2001).

## Expectations of community organizations

Apart from the effects expected at the individual level, community organizations also had their own expectations.

### Facilitating communication

In Uganda and Kenya, community organizations would use ICTs to facilitate communication processes and to mobilize their members through the establishment of reliable, real-time communication systems, combining email, in particular, with traditional community communication systems. These organizations also expect the use of ICTs to improve management and to facilitate planning and organization of their activities. For community organizations, access to useful and relevant information for their members

(e.g., economic, cultural, and sports activities) constituted a major concern. This information would be used to help members make better and more rapid decisions in their various activities. Generally, ICTs can improve the capacities of grassroots organizations to communicate and make their voices heard through the roles they play in their communities.

### **Establishing networks**

Information and Communication Technologies (ICTs) can be used as a medium to establish networks between community members or with the outside world to improve the institutional context of these communities. In South Africa, in the rural communities around the Msunduzi River, ICTs, particularly Internet technologies, are expected to allow access to new communication tools and to provide a medium for discussion and exchange among different community organizations. These organizations expect to enhance their knowledge about the environment and development. These communities also expect ICTs to lead to the creation of new organizations and to the development of active partnerships between these organizations and other institutions. They also hope to influence development policies and encourage the changes needed to ensure improved natural resource management in areas surrounding the Msunduzi River, which are increasingly affected by ecological problems. In Senegal, ICTs are considered as development tools to facilitate access to information and to make recent information available to expand the knowledge base of local populations.

### **Establishing modern communication systems**

Community organizations expect ICTs to provide modern, reliable, and fast communication systems that can be combined with traditional community communication systems (e.g., weekly markets and traditional drum systems).

### **Improving working conditions**

Recurrently, the populations expect ICTs to improve working conditions within community organizations, particularly through improved time and resource management. This is important to these organizations because most of the community actors are voluntary workers. In remote and land-locked regions (e.g., Podor and Tambacounda), ICTs are expected to reduce the isolating

effects of distance and allow effective participation of scattered actors in community life.

### **Increasing external contacts and diversifying partners**

Entrepreneurs expect to gain more external contacts and thus increase the prospects of diversification of their economic partners. ICTs are also expected to contribute to employment generation through the creation of new jobs. The project leader of the Acacia-supported project “Introduction of ICTs to the Management and Rehabilitation of Village Communities” believes that ICTs can have a significant effect on local governance:

Community Information Centres (CIC) play an important role in local governance: the fact that forms from the Maka Coulibantang registry office are made available at the CIC saves the people about 5,000 FCFA in transportation costs. This is one direct effect on individuals. Eventually, secondary positive effects are expected on schooling levels, specifically among girls. The father of an average family in Maka can hardly spare 5,000 FCFA to pay for a registry office form while he is beset with survival problems. With the CIC he will pay only 200 FCFA. Another secondary effect to be expected is the collection of reliable statistics for use in drawing up local development plan. (Statement made by Abdou Fall, Acacia Project Team Leader, at the feedback workshop on ICTs and Community Development, Senegal, July 2001).

### **Conclusion**

In general, community expectations directly correspond to the theoretical effects described in the literature on ICT. Tables 10 and 11 show that these effects are often inaccurate and general in nature. They reflect the level of understanding that communities have of the relationship between ICTs and the improvement of their living conditions.

The positive attitude of communities toward ICTs is also remarkable: very few respondents are concerned with the potential negative effects of ICTs. This attitude is very important and can be construed as an inclination to adopt ICTs, or at least as non-rejection of these tools by the communities. This attitude also suggests that the transforming potential of ICTs can be exploited to enhance development efforts.

With regard to how projects on the introduction of ICTs can be effective, the people suggest that there probably cannot be a single strategy. Basic studies that seek to highlight the diverse needs and expectations of people must be systematically conducted. Furthermore, these expressed expectations can be used as reference points for future investigations designed to measure specific changes over time due to the use of ICTs.

**Table 10:** Changes expected from use of ICTs according to context envisaged (Uganda)

Context	Changes expected	Percentage
1. Workplace	Easy communication	31.8
	Facilitating profit-yielding activities	13.6
	Facilitating exam/test preparations	9.1
2. Contact with family members	Easy communication	14.3
	Settling family problems	7.8
	Reducing transportation costs	7.8
	Improving and stimulating socialization	5.3
3. Trade and transactions	Easy communication	0.5
	Facilitating transactions	1.0
4. Research and education	Improvements	0.2
	Acquiring new knowledge	0.2
5. Health and sanitation	Information about disease prevention	1.3
6. Agriculture	Information on high-yielding varieties	1.3
7. No response		5.8
Total		100.0

Source: Etta et al., 'Inquiries and questionnaires, ICTs and Community Development Study, Uganda, November 2000' (2001).



**Table 11:** The roles that ICTs are expected to play within communities (Senegal)

Roles (more than one answer from each respondent)	Number	Percentage
Development tool	144	28.6
Easier access to information	53	10.5
Better working conditions	49	9.7
Acquiring better knowledge	47	9.3
Reducing distance constraints	33	6.6
Facilitator	32	6.4
Time saving (faster pace of activities and decision-making)	28	5.6
Increasing external contacts	18	3.6
Facilitating changes in the community	18	3.6
Favouring integration	16	3.2
Making recent information available	12	2.4
Creation of new jobs	15	3.0
Combating illiteracy	9	1.8
Archiving	7	1.4
Saving money (reducing communication and transport costs)	6	1.2
Providing possibilities of using state-of-the-art software	6	1.2
Noted cases of under-utilization	5	1.0
Experiment to be encouraged	4	0.8
Danger for African cultures	1	0.2
<b>Total</b>	<b>503</b>	<b>100.0</b>

Source: Thioune and Sène, 'Inquiries and questionnaires, ICTs and Community Development Study, Senegal, November 2000' ( 2001).

