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Information and Communications Technology, National Development
and Scaling Up the War Against HIV/AIDS

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ICT and National Development: The Challenges and the Opportunities

The enabling capacities of information and communications technologies have become so fundamental to the daily social, economic, political, administrative and cultural life of any society and the joint pursuit of individual self-actualisation and a better quality of life for all society, that they effectively constitute basic tools of national development. Those who have the appropriate ICT infrastructure and the corresponding applications, software and content to derive the full benefit of the products and services they provide continue to experience rapid development, even when the fortunes of the ICT companies themselves hang on the balance.

Those who, on the other hand, do not have adequate ICT infrastructure and the corresponding applications and contents, and therefore cannot avail themselves of the benefits of ICT products and services, risk marginalisation of a substantial scale sufficient to be marooned on the wrong side of the "digital divide". For those countries like Lesotho that are already at the receiving end of the asymmetrical dispensation of global wealth and opportunities, the risk of further marginalisation through the failure to embrace ICT and capture it for quantum development is a stark reality.

ICT has a duality of capacities: as a basic infrastructure for information and communications, that is, as a utility; as well as as an enabling capacity which supports, and in many cases, drives practically all other sectors, through its own products and services. In other words, there is a dual challenge: that of ICT development, as well as that of ICT for development. Both aspects of this duality are compelling challenges to the government and people of Lesotho as the Kingdom constructs its long-term strategies for national development within the framework of its key strategic policies such as the draft National Vision, its Poverty Reduction Strategy and other policy frameworks it is putting in place to achieve its primary development goals. ICT can greatly advance prospects of overcoming the HIV/AIDS pandemic, eradicating chronic poverty (replacing it with sustainable wealth) and achieving and entrenching food security within a healthy and protected environment and ecosystem. It can also provide a critical platform and supporting tools for the achievement of sustainable popular democratic governance and the national stability that comes with it, as well as enhance the overall social and economic well-being of all its people.

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The Challenges

To meet the challenges of ICT development, the following issues and capacity needs must be addressed:

- Definition and determination of specific objectives of ICT development through appropriate assessment and policy formulation;
- ICT infrastructure needs assessment and related needs such as reliable and affordable energy supply;
- Resource identification, mobilisation and deployment;
- Human resource capacity development;
- Science and Technology development (especially through research and development capacity building);
- Industrialisation at appropriate, sustainable and beneficial sectors and levels;
- Capacity building in software and applications development;
- Local content development for domestic use as well as for export;
- The building of technical competence in such areas as systems design and integration as well as in infrastructure design, building, management and maintenance;
- Access to, capacity to select, and when possible, ability to develop, appropriate technologies to provide more, better and more affordable products and services to meet specific local needs, conditions and usage culture;
- Popular and public education regarding both the benefits of ICT and how to utilise its specific products and services for enhancement and self-development;
- The courage and ability to embrace the new way of doing things inherent in the adoption of ICT as a new and pervasive platform for the systemic operation and management of business, government, health, education, agriculture and the various other aspects of national life;
- The courage and willingness to undertake the re-education necessary to take the fullest advantage of the facilities of ICT, even at high levels of authority where the appearance of the need to know is often considered a threat to the preservation of old-fashioned authority and power;
- The wisdom to identify the limitations and potential downside of ICT and the corresponding courage to hold the line where the primacy of inherent culture and desirable lifestyle is threatened by the wholesale adoption of technology; in other words, the constant recognition of the primacy of cultural and human priorities over technology for technology's sake, and the compelling need to subjugate technology to the commanding dictates of human priorities.\(^2\)

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The Opportunities of Innovation

While meeting some of these challenges might be daunting at first, the benefits they accrue to society and the people far outstrip the concomitant commitment of political will and material resource, and the necessary modifications in modus operandi. Some of these benefits and opportunities include:

- The ability to transform a national economy from poverty to equitably distributed wealth through the development and the deployment of intellectual capacity and resource even in the absence of much material resources;
- The opportunity to create a niche market for which the country could become the first port of call for investment seeking opportunities in such a niche market;
- The opportunity to build new and modern infrastructure, systems and processes without the burden of rapidly obsolete legacy infrastructure and practices;
- The opportunity to reach far flung communities to deliver quality goods and services, thus overcoming the current limitations of distance and isolation;
- The delivery of critical services such as health and education, to urban as well as rural and remote communities, stretching the capacity of limited material and human resources, as well as expertise through the benefits of network technologies;
- Improved democratic and transparent governance by virtue of easy access to public information and resources, and the ability to establish a two-way dialogue between the citizens and those who govern, and the improved prospects of political stability which come with such public enlightenment;
- Improved productivity by virtue of the simplification of energy and time-consuming exercises which ICT deployment can drastically reduce if not completely eliminate;
- The ability to create massive united effort behind a common cause such as, in the case of Lesotho, the War against HIV/AIDS;
- Access to the world and its vast knowledge, culture and information, and the reciprocal exposure to the world of local knowledge, culture and information;
- Opportunities to create well-paying job opportunities in ICT especially for the young and ambitious as a way to also stem the tide of emigration in search of more fulfilling opportunities and challenges;
- National integration which comes from a higher level of shared ideas, dreams and ambitions on the basis of a common people with a common dream and purpose.

ICT in Support of Scaling Up the War Against HIV/AIDS

The challenge of the HIV/AIDS pandemic in Lesotho, and indeed in much of the SADC region where the level of infection is variously placed at about 30% of the population, cannot be fully understood and conceptualised, unless portrayed in their vivid dimensions.

1. Lesotho at present has a negative population growth due to HIV infection. This means, theoretically, that it can conceivably have its population reduced to a point of virtual non-existence.
2. The inversely proportional rate of orphanage of Lesotho children itself constitutes a major obstacle to the family, social and cultural health of the Basotho. The end result is a scenario of uncles and aunts, and in fact ill-equipped grandparents looking after lots of young children, in addition to their own. Ultimately, it results in children raising children. The direct impact of this on school population, and the quality of education, is glaringly self-evident.

3. If we factor in the rate of infection of children by HIV infected mothers, the picture dims further. We will have fewer healthy children becoming adults, an age group which itself is experiencing a declining and weakening population.

4. Given the fact that men and women are naturally at their most virile and productive in their youth, the sapping of energy caused by HIV infection threatens to render the population drastically non-productive at what should be its most productive phase.

5. The direct impact of this on the numbers and strength of the labour force, and its productivity, and their combined impact on the national economy, are equally unimaginable.

6. From an economic point of view, this means that businesses, from micro to small and medium-size enterprises, and all the way to corporate entities, will not only experience low productivity due to illness and absenteeism, but will also be faced with a declining market, as the large and revenue-earning population it needs to constitute a market will itself decline. This means that the compulsion of the economic sector to take an active role in the War against HIV/AIDS is not altruistic, as some might think, but a matter of active self-interest and survival.

7. The social and cultural impact of this scenario is that society as we know it today might become so embattled, that the norms which have been the underpinning of the culture, risk being shredded.

8. From the point of view of poverty reduction and food security (the two other key foci of the Lesotho national development priorities in addition to the War against HIV/AIDS), it is clear that these goals cannot be achieved without a radical reversal of the infection process and its devastating impact on all aspects of social and economic life, productivity, quality of life and joie de vivre.

This is the downside of the HIV/AIDS pandemic in Lesotho; the challenge if you will.

**The Opportunity**

As with all significant challenges, the compelling need to respond to this pandemic and the threat it poses, offers the Government and people of Lesotho, the private sector and civil society, and indeed the country’s friends and development partners, a unique opportunity to rise to the clarion call by galvanising and unleashing their genius in meeting this threat head-on in a comprehensive and sustained manner.
From the point of view of long-term strategic planning, there is the collateral compulsion to craft policies and strategies which permit the mobilisation of all available resources, in all their possible configurations, to forge a comprehensive, coherent, holistic and eminently effective drive to reverse the HIV infection process in Lesotho, and thus restore the natural process of growth and development to the land and population. This will permit Lesotho to pursue the best possibilities of development, taking advantage of the best of its human and natural resources, on the backbone of its eminent historic and cultural heritage.

ICT against HIV/AIDS

In such a comprehensive and holistic thrust, the unique array of facilities and deliverables of information and communications technologies offer a significant opportunity for jumpstarting the process of a vigorous campaign against this unacceptable challenge to human health and development.

These deliverables may be classified as follows, in accordance with the areas of their potential impact:

1. Knowledge and Information
2. Culture, Perceptions and Definitions
3. Information and Data Collection
4. Public Enlightenment
5. Dialogue vs. Instruction: Relinquishing the Disposition to Didacticism
6. HIV/AIDS-specific Health Management, Education and Training
7. Diagnostic and Treatment Support via eMedicine Solutions
8. Support for Compliance with Medication Regimes
9. Online Employment of HIV/AIDS patients
10. Innovation through Research and Development

Knowledge and Information

The dynamics of contemporary existence require a much higher level of individual and group knowledge and information than used to be the case when such capacity was considered to be necessary only for the professional. In the case of HIV/AIDS, there is a need to create a minimum threshold of everyday knowledge about the disease, its cause, nature, symptoms, impact, consequences and management, as a basic public knowledge. The failure to pursue the creation of this knowledge threshold is a major flaw in the battle against the disease. The capacity of ICT, especially through broadcast as well as network information access and diffusion, offers a simple and relatively inexpensive way to create this basic HIV/AIDS knowledge threshold.
Another major flaw in the current established approach to the drive against the disease is the assumption, perhaps presumption, that the campaign against the disease and its management are “scientific”, by which, in common parlance, it is understood to be culture-neutral. Besides the fact that science and technology are both intimately culture-determinant, the management of, and response to, disease (especially one that is so intimately tied to social behaviour and subject to cultural perceptions and the resilience of traditional norms and practices), the pedigree of HIV/AIDS and the response to it is significantly culture-dependent.

Furthermore, the unfortunate political, social and geographical bias in the earliest efforts at determining the origin of the disease, that which promptly “blamed” it on Africa, created a resistance to the strategies and policies which have been established in the fight against it. The natural instinct to resist being typecast as the cause or source of any major disease, and therefore to be suspicious of the solutions propagated by people who are also perceived as coming from the same source and heritage as those perceived to be the architects of such “blame”, has been under-estimated with devastating consequences. Apropos this, for example, many traditional healers in Lesotho are said to consider HIV/AIDS to be an alien mischief, and the condom, an instrument of a “plot” to destroy the Basotho.

The failure of the condom campaign in much of Southern Africa would seem to suggest that there are additional problems of culture and perception. One such suggestion might be the cultural difference between Africans and the West with respect to the acceptability of explicit discussions of sexual matters, especially across generational boundaries.

In all of this, in the definition and analysis of these cultural differences and sensitivities, the public dialogue on their implications and consequences, the crafting of a new and more efficacious approach to the challenge, and the dissemination of the resulting strategies and the policies and programmes for their implementation, ICT offers tremendous tools for a Lesotho-specific approach to the War against HIV/AIDS. Such a solution offers a greater promise of constituting a significant and sustainable counterforce against the disease. ICT does so in all its modalities: broadcast, print, telephony, networked education, SMS and other personal information sharing applications and more. The result will also be one that is easier to accept and engage in by the Basotho, because they can take ownership of it, being that it would have derived from their cultural and social norms, perceptions and practices.
Information and Data Collection

A major challenge in the War Against HIV/AIDS is the paucity and accuracy of information and data (both statistical and episodic) on all aspects of the infection, spread, impact and control. Although this is part of the general problem of statistical information gathering in Lesotho and throughout much of the developing world, the urgency of the response to the disease compels the crafting of a better way to obtain accurate data and information, especially from rural and remote areas where the impact of the disease is no less devastating than it is in urban centres like the capital city, Maseru. ICT offers the best response to this challenge. Innovative use of broadcast technology, especially of radio, as well as the establishment of the Infrastructure for online or networked information gathering through the Internet and Intranet, would greatly enhance the scope and quality of such information and data collection mechanisms and processes.

Similarly, the same system, driven in the opposite direction, can enhance the dissemination of information and data about the disease to the Basotho population across the country, from urban areas to rural populations.

Public Enlightenment

While there is general agreement that in order to even have a fighting chance of combating HIV/AIDS and rolling back its prevalence and debilitating impact, the public must become knowledgeable about it, there is equally general agreement that few people have functional knowledge of the basic facts about it. In fact, it can be said with reasonable accuracy that most people have more erroneous notions about HIV/AIDS than facts. This plays a major role in the difficulty of getting the fundamental message of the true enormity of the threat of HIV/AIDS to humanity’s future to the Lesotho public at large. Most of the programmes that have been implemented to advance public enlightenment have essentially failed.

Why has the message failed to get across? What must be done differently and how? Our best hopes of finding efficacious answers to these questions just might lie in the crafty deployment of ICT’s versatile applications in the HIV/AIDS battlefield. For example, those who are most affected by the disease, either directly as victims, or indirectly as family, friends and employers who must care for them, belong to a totally separate group from those who design and deploy the public enlightenment programmes. With no commonality of understanding and instinct, communication atrophies, leaving the messenger marooned with his or her message, while the audience is left alone at the dusk of despair to ponder listlessly in private how best to cope with a personal nightmare.
To undermine this strategic fault, a deliberate programme of promoting local content development in all aspects of the media, must be crafted and implemented. The very act of doing so, providing local ownership of the message and the means for its delivery, especially within the context of commonality between the messenger and the audience, will leapfrog this gulf of understanding, and help bring home the HIV/AIDS message the way it badly needs to. The intellectual basis of this is the importance of identifying with the messenger in order to be most receptive to the message.

With the support of community and communal leaders, storytellers, local chiefs and traditional healers combining to form the local corps of HIV/AIDS messengers, and backed by broadcast (especially radio, and in Sesotho), this local content initiative could transform the playing field of public enlightenment, even creating an eagerness to learn about and openly discuss the disease, its cause, prevention, management and ultimate cure.

Where the infrastructure might prove to be a limitation, innovative deployment of IP-based rural and community radio broadcasting could fill the gap. The same infrastructure can then double up to provide other services, such as education, administrative and routine health services.

From a cultural point of view, traditional myths, narratives, beliefs and norms could be cleverly adopted and adapted to support the process, taking advantage of the human penchant for seeking a little public attention, a fact most true of traditional healers and chiefs.

Such an effort, spearheaded by Basotho youth (both male and female) and drawing on the familial affection basic to the culture, and deployed with a thorough knowledge of, and sensitivity to, the respect of traditional attitudes towards public discourse of sexual matters, would have the additional value of enhancing urban-rural and cross-generational integration. This would prove to be a critical means of disseminating information on both prevention and care of the infected.

**Dialogue vs. Instruction: Relinquishing the Disposition to Didacticism**

A related concern is the fact that the flow of ideas, information and knowledge about HIV/AIDS is in one direction, from the AIDS worker to the infected or populations at risk. This comes down as instructions (and sometimes pontifications), with the presumption that those infected or at risk have nothing to say or share. The approach therefore becomes didactic, often coming across as condescending. And yet, who knows more about the experience of HIV/AIDS than those who either have it, or have to care for those who have it?
A programme to learn lessons from the experience of the infected, those at risk or those who care for them, holds the promise of a new world of insight into how to fight the War against the pandemic. ICT applications offer the best instrument for such an effort. For example, given the fad of mobile telephony amongst the young who also constitute the largest HIV-infected or at-risk population, a simple programme of using SMS to share HIV/AIDS information or to broadcast short messages could have dramatic instantaneous impact that can then be sustained by broader programmes.

**HIV/AIDS-specific Health Management, Education and Training**

Given the level of HIV infection in Lesotho and the challenge of HIV/AIDS management, there is a need to train a much larger number of care-givers, from the level of nurses and home-care providers to family members who could use some basic knowledge and training. ICT applications, from radio and television, to online and storage and retrieval training programmes, offer tremendous opportunities in this regard.

**Diagnostic and Treatment Support via eMedicine Solutions**

Furthermore, given skewed proportions between patients and healthcare facilities, in addition to the reality of remote small populations with little medical facilities, electronic health or (eHealth) programmes provide the only affordable means of delivering critical services, from diagnostics to prescription and monitoring. There is so much innovation in the eHealth field that new and versatile services should rapidly become more affordable by the day.

**Support for Compliance with Medication Regime**

A much-debated issue with regard to the provision of HIV medication in Africa as a whole, including Lesotho, is that of how to monitor the medication regime so critical to achieving the benefits they provide. In the absence of the battalion of nursing aids that will be required to administer such medication individually to every AIDS patient, simple and innovative use of common ICT facilities and applications can be devised to serve this purpose.

**Online Employment of HIV/AIDS Patients**

A major part of the challenge of HIV/AIDS is the economic, social and psychological debilitation it foists on the patients and their families. The physical and psychological aspects, including especially their condition in the advanced stages of the disease confines patients to the isolation of the home, hospital or other healthcare facility. The loss of income creates poverty which, in turn, increases the vulnerability to the disease as a result of the increased malnutrition. Furthermore, given the fact that a good number of these patients once had productive employment, the psychological consequences of being rendered both unemployable and without gainful activity, reduces the emotional fortitude of the patients.
A bold, innovative and comprehensive programme to provide skills development and online employment for HIV/AIDS patients in a public/private partnership holds immense possibilities in this regard. Given the network capacity of ICT technologies, support participation for such an initiative could be global, reaching well beyond the national boundaries of Lesotho.

**Innovation through Research and Development**

Above all, there is no way to combat a disease so prevalent in Lesotho without a comprehensive research and development programme in any one of the myriads of areas where innovation could make a difference. Such research with respect to how to use ICT applications to support various aspects of the War against HIV/AIDS would suggest itself as a worthy area of strategic national investment.

**A Compelling Priority**

Overall, scaling up the war against HIV/AIDS in Lesotho is a compelling priority if the promise of development and the quantum expansion of the quality of life and self-actualisation for the people are to have meaning and efficacy. ICT, in its versatility and nimbleness, constitutes an area of possibilities, the embracing and deployment of which should greatly enhance the fighting capacity of the nation and its people. Fortunately, in the process, it will also promote greater national integration, and the benefits of nation building that come with it.