May 2009

Microsoft Unlimited Potential

Realizing Africa's Potential through People and Technology

ENGAGEMENT PAPER

AFRICA

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The strategy and initiatives described in this report are borne of Microsoft's deep commitment to enable social and economic empowerment. Our investments aim to help Africans realize their own and their continent's full potential by transforming education, fostering local innovation and enabling jobs and opportunities.

Flamingos in Lake Nakuru, Kenya

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Helping to Realize Africa's Potential by Investing in People and Technology

School Children at Osire refugee camp, Namibia

Education in Africa

- Employ 1,580 employees
- Contribute to the generation of 629,530 IT-related jobs through our partners
- Invested US$2.3 billion in 2007

50%

Over 50% of people are under the age of 30

Supporting Africa's development and the MDGs

Africa is rich in human and material resources. The continent houses the youngest population in the world – over 50% of the people are under the age of 30. It is a burgeoning market, with 965 million people, close to 20% of the world's population.

Since 1995, Sub-Saharan Africa has seen its strongest rate of economic growth in decades because of increased investment, high prices of key commodities, greater stability, and reductions in inflation.

In 2007, average growth in the Sub-Saharan economies was 5.3%. Between 1990 and 2004, the number of Africans living in poverty decreased from 47% to 41%, and literacy rates increased from 54% to 62%.

But despite this solid progress, social and economic improvements vary significantly within and between countries. By 2015, Sub-Saharan Africa is one of two regions not expected to reach most of the **Millennium Development Goals (MDGs)** – the other being South Asia. While 25 African countries will meet one or more of eight goals, 23 are not likely to meet any of the MDGs.

Leveraging Africa's rich resources and the skills, ambition and determination of its people to lead better lives – with access to health, education, and opportunities – and progress in social and economic development, is one of the major challenges facing the continent today.

As a leading technology company - established in Africa since 1992 with 19 offices, more than 400 employees and thousands of partners across the continent - Microsoft recognizes that it can and should make a substantial contribution.

Our aim is to enhance Africa's capacity for development, so that the continent can benefit from internally generated and sustainable development. Our over-arching goal, together with our partners, is to make sure that technology supports and accelerates progress towards the MDGs and sustainable development in Africa.

Unlimited Potential: How we think about social and economic development

Despite the rapid spread of technology to more than 1 billion people worldwide, today more than 5 billion people throughout the developed and developing world still do not have access to **Information and Communication Technology (ICT)** and the benefits it brings.

Our collaboration to enable social and economic development is called **Microsoft Unlimited Potential** which is unique in the alignment of the company's advanced technologies and strong partnerships with governments, international organizations, non-governmental organizations (NGOs), educational institutions, and technology and service partners.

Ultimately our mission is to enable sustained social and economic opportunity for those at the middle and bottom of the world's "economic pyramid" —the next 5 billion people by[1] :

- Transforming education
- Fostering local innovation
- Enabling jobs and opportunities

In these three areas, Microsoft Unlimited Potential can create the greatest possible impact in building a virtuous cycle of sustained social and economic development.

This cycle drives communities; helps build connections to form new communities; is fuelled by local and global partnerships; and most importantly, ultimately becomes locally sustainable. Sustainability is a key indicator of effective programs and activities, and is our long-term measure of success.

ICT for Development
Economists and policymakers agree that investments in ICT are crucial to economic growth and development.

By making information more accessible and usable, and communications faster and more widely available, ICT has reduced the traditional constraints of distance and culture, and dissolved many distinctions between national and global economies.

Effective use of information has concrete consequences: employable skills, effective decision-making, institutional efficiencies, and financial transparency.

Today a small business in Nairobi or a large mine in Zambia may be more exposed to shifts in global demand than to changes in local economic conditions. Both require the information and access to technologies that enable them to adjust and exploit these interdependencies to their best advantage.

Another meaning for "ICT" = Integration, Collaboration & Transformation
Indeed, the acronym "ICT" might usefully be thought of as standing for technologies that facilitate the **Integration** of information in order to facilitate **Collaboration** among individuals and organizations, resulting in the **Transformation** of political, social and economic processes through the effective application of knowledge.

"In each country Unlimited Potential is tailored to the particular things that we hear from the government and the citizens they're interested in, but it's always to do with education, to do with innovation, and creating jobs in that environment."

Bill Gates,
Chairman, Microsoft Corporation

Tailor shop owner and entrepreneur, Karolina Juma, Mozambique

[1] *C.K. Prahalad and Stuart Hart, "The Fortune at the Bottom of the Pyramid"* (PDF), 2002.*

Strategic principles for ICT for development impact

Political development: Strengthening Government and Institutions
Legal development: Rule of law, freedom of expression, property rights – including access to intellectual property rights, especially for SMEs
Social development: Expanding education & ICT skills
ICT infrastructure development: Connectivity channels, but also interoperability policy, and locally accessible innovation centers.
Entrepreneurial development: Empowering businesses to start-up, grow and thrive with access to technology, finance, services, markets and people, and without unnecessary red tape.

In addition, increasing connectivity or distributing computers and software do not directly lead to development impacts unless other factors converge to make those impacts real.

Factors such as the regulatory environment, the availability of appropriate skills, and the ability to spur organizational change are also critical for countries to derive economic benefits from ICT.

Our premise is that ICT is a lever and enabler for social and economic development to occur within a broader context of policies to encourage transparency, legal, and infrastructure development.

Africa – areas of priority in our engagement

In Africa, several barriers stand in the way of effectively reaching underserved communities, including environmental or infrastructural obstacles, localization issues, the need for personalized solutions, and the prohibitive cost of technology.

Africa today remains one of the regions with the lowest ICT penetration in the world. According to the International Telecommunications Union, only 1 in 27 people have a main telephone line and 1 in 18 people are internet users.

While these figures do not take into account the considerable variation in statistics between countries and within countries overall rates of access to and use of ICT remain low. And many of the ICT services are concentrated in large towns, while the majority of Africans (70-80%) live in rural areas.

ICT key facts for Africa

	Population	Main telephone lines		Mobile subscribers		Internet users	
	000s	000s	p. 100	000s	p. 100	000s	p. 100
North Africa	157'070	18'670.9	11.91	83'865.0	53.39	21'402.2	13.64
South Africa	48'580	4'642.0	9.56	42'300.0	87.08	5'100.0	10.75
Sub-Saharan	757'880	12'098.3	1.65	138'310.0	18.28	23'904.2	3.23
AFRICA	963'530	35'411.2	3.77	264'475.0	27.48	50'406.4	5.34

Source: International Telecommunications Union, 2007

In determining how to most appropriately extend our business and social investments in Africa, we have been guided by the following considerations:

- Continued alignment with the **Millennium Development Goals**
- **Utilize our core competencies** – our people, technology, skills and resources
- Build **implementation capacity and impact** at the grass roots through our projects
- And support **African priorities** for development through ICT

One of the clear messages that has informed our strategy is the ambition of many Africans to build a modern and competitive knowledge economy for their societies, which is able to compete on an international scale.

Based on the inputs of our partners, African governments and regional and international development organizations, we have identified the following areas where we can support African development priorities through our 3 pillars under Unlimited Potential:

Transforming Education
- Continue to scale-up the provision of education in the face of big challenges such as the availability of teachers and shortage of schools
- Bring ICT in teaching and learning from primary school to the secondary and tertiary levels to develop an educated workforce with globally applicable knowledge and skills

Fostering Local Innovation
- Nurture and help to develop a local IT industry that is competitive and world-class, and helps to drive a multiplier effect on employment throughout the economy- Contribute to local communications and connectivity infrastructure through innovative products and services that are adapted to local conditions and needs
- Improve services for African citizens through e-government solutions that enhance transparency and efficiency, and empower local communities

Enabling Jobs & Opportunities
- Contribute to a thriving African technology economy by stimulating competitiveness and innovation in Africa's small and medium sized enterprises and beyond
- Support capacity-building in the public sector and with inter-governmental organizations and non-governmental organizations working on the ground in Africa

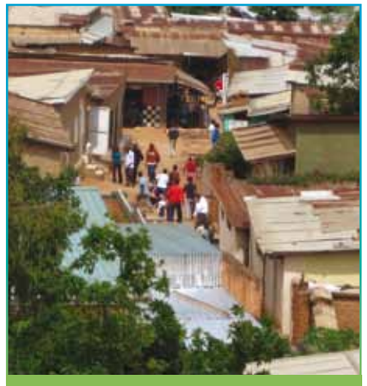
The importance of partnerships

In understanding where and how to deepen our contribution and impact, it has been crucial to listen and engage with stakeholders in Africa. These stakeholders include national and local governments, non-governmental organizations, inter-governmental organizations, our local business partners and our own employees.

Microsoft Unlimited Potential believes that a collaborative, multi-partner approach across sectors enables individual organizations to combine expertise, funding and local knowledge for the development of unique solutions and programs.

Ultimately our collaboration creates the potential for solutions that are **greater than the sum of each entity's individual contribution** – for greater impact.

We are also working with Africa's main regional organizations such as the African Development Bank (AfDB), the African Union (AU), the New Partnership for Africa's Development (NEPAD) and the Economic Community of West African States (ECOWAS) to respond to the region's evolving needs and foster the creation of regional, scalable technology solutions.



Kilagi, Rwanda

"Give people the right tools, empower them with the right knowledge and provide them with the right opportunity and you'll see them build their own futures. Our engagement in Africa is firmly rooted in this approach."

Dr. Cheick Modibo Diarra, Chairman for Africa, Microsoft

ICT forum

Best Practice Sharing Forum

In our engagement in Africa, we consistently emphasize the exchange of knowledge and best practices between development actors. In 2007 we launched a series of African ICT Best Practice Sharing Forums to support African governments seeking to accelerate the use of ICT solutions to drive local growth and development for their citizens and businesses.

The inaugural forum was hosted by the Government of Burkina Faso in June 2007 drawing 350 high-level participants including 40 ministers, followed by a second forum in April 2008.

Government leaders, NGOs, bilateral donor organizations, private companies and academia are invited to contribute to the forums, and discuss strategies and practical solutions that would improve the efficiency and effectiveness of public sector institutions through the use of ICT.

The forums provide African politicians and civil servants a new means of identifying solutions that work through the sharing of best practices, and the critical steps that are needed if they are to be successfully replicated. The 2008 event was sponsored by the European Union.

EU-Africa Business Forum

Dr. Cheick Diarra, Chairman for Microsoft Africa, was appointed co-chair for the EU-Africa Business Forum in March 2008. The EU-Africa Business Forum brings together entrepreneurs and public and private investors from Europe and Africa to discuss ways of improving the investment and business climate in Africa.

Microsoft has been an active participant in the EU-Africa Business Forum since its launch in 2006. Cheick Diarra was previously appointed as co-chair of the Interconnectivity Working Group from November 2006 to February 2008.

Through the EU-Africa Business Forum, Microsoft has advocated policy development processes with a view to securing sustained joint activity throughout Africa in the implementation of ICT for development projects and has provided insight on how best to leverage public-private partnerships.

The work has also resulted in securing new funding for key ICT projects such as AfriPANet and the NEPAD e-Schools program (as described in the chapters below).

I. Transforming Education

When talking to national leaders we find a common theme around their wish to create diverse knowledge economies with a global reach.

Doctors, engineers, scientists, technologists, entrepreneurs, lawyers, accountants, publishers, and the vast range of specialists are needed to accelerate these countries' economic development, not produce another generation of subsistence farmers.

Governments need efficient, diverse, and flexible learning programs that go beyond addressing basic literacy.

It requires access to specialist knowledge and learning infrastructures, to help overcome the shortages of qualified teachers, and to forge learning communities that can share knowledge on a local, regional, and global level.

Bringing technology to schools

New Partnership for Africa's Development (NEPAD) - eSchools
Microsoft has been a leading private sector partner in the eSchools initiative, as part of a broader program implemented in partnership with the NEPAD eAfrica Commission, the United Nations Development Program (UNDP), African governments, and private sector partners.

The program's aim is to overcome the structural barriers to the use of computers in African schools and enable them to participate in the global information society. NEPAD eSchools are provided with a computer lab, software, Internet connectivity, maintenance, and a digital Smart Board connected to a projector which allows users to input directly on the screen.

The teachers and school administrators are trained to use the equipment for teaching and learning and to help manage the school.

With Microsoft's support, the program has already been implemented in over 25 schools in Kenya, Lesotho, Mauritius, Cameroon, Senegal, Mozambique, and Rwanda and has reached out to over 1,000 teachers and 20,000 students. The aim is to ultimately connect all 600,000 primary and secondary schools in Africa.

Students in Gisenyi, Rwanda

Education in Africa

- Average literacy rate - 62% (in the 29 countries for which data is available)
- Primary school enrollment - 96%
- Secondary school enrollment - 35%
- Tertiary education enrollment - 5%

Source: World Bank, "Africa Development Indicators 2007"

"I think the key word for Africa is how do we make sure that our kids have the same opportunity as other young people around the world. We need to equip them with the same skills and technology to be competitive."

Richard Kiplagat, Global Strategic Accounts Manager, Microsoft

The eSchool lab at Gisenyi Secondary School, Rwanda

Access to connectivity and ICT training: eSchools in Rwanda

The Gisenyi Secondary School of Sciences, located near Lake Kivu in Rwanda, has been part of the NEPAD eSchools project since 2006.

Today, the 733 students at Gisenyi's eSchool have access to 24 computers and can surf the Internet thanks to a satellite-based connection. The computers also provide access to curriculum and Encarta software.

"The project has transformed our school. Before we only had one computer, in the office. Students used to learn about computers theoretically, "explains Servkiza Murembe Chamin, a teacher. "Now we have one of the best lab rooms in the country. We give students updated content."

NEPAD eSchools also have a broader impact on local communities. In Rwanda, where annual school fees are around US$150, sending children to school remains a major expense. By bringing ICT to students, teachers and school administrators, parents better understand and appreciate the value of education.

InterConnection Uganda refurbished computers

Microsoft is also supporting access to more affordable computers for schools that are not connected to the Internet. **Interconnection Uganda** is a PC refurbishment company based in Kampala that imports, refurbishes and sells second-hand PCs sourced from the US, at a price which is affordable for the local population, starting at $140 per PC.

Being recognized as a Microsoft Authorized Refurbisher (MAR) enables the company to load affordable software, as well as skills development content for students, staff, interns and the local communities.

"Microsoft provides us with XP Office and software like Encarta which is like sitting on the Internet without being connected," explains John Kyakuwa, Chief Technical Manager at Interconnection Uganda.

John Kyakuwa, Chief technical Manager at Interconnection Uganda

The Talents College, Uganda

The Talents College of Mukono, located 30 minutes outside Uganda's capital Kampala, has opened a computer lab using InterConnection Uganda refurbished computers. "We are not yet connected to the internet but we get lots of information from the Encarta program," says School Director Frederick Nganda Kaweesa. "These are not new computers, they are refurbished computers. But as far as we are concerned, they are as good as new."

The computer lab also helps the school's 14 to 18 year old students better prepare for future employment. Nabukeera Sambra, a student at Talents College, is aware ICT enhances her opportunities in life. "I'm proud because not many people know how to use computers. I can get a job and manage it."

Like many other students here, she also teaches her friends, sisters and brothers how to use computers when she comes back home, to help them also benefit from technologies.

Students using refurbished computers at Talents College, Uganda

Expanding technology access to rural schools in Lesotho

In November 2008, Microsoft launched a partnership with the Lesotho Ministry of Education & Training and African technology companies, to offer students in Lesotho the chance to experience technology in a collaborative and interactive way.

Currently under pilot at a rural school in the village of Ha-Tuma near Maseru, the ICT program is intended to address the demand for a sustainable and affordable solution in rural, non-electrified schools with few resources.

Using a rugged compujector from AstraLab optimized for Microsoft Windows MultiPoint, students are able to simultaneously use the PC and interact with education content from LearnThings, Mindset and Microsoft Encarta with multiple mice and color-coded cursors.

Microsoft is also training teachers on how to use the compujector and developing public outreach programs for the rest of the community, to raise awareness on local health issues such as HIV/AIDS using the compujector as a teaching device.

Microsoft is also testing the efficiency of using a generator and a low-cost solar power solution suitable for rural schools without access to electricity. The partners are currently in discussion on how to scale the solution across the country.

"With support from Microsoft, we have worked on training teachers because to reach students, you first have to train teachers – this is what Partners in Learning has understood – while at the same time cooperating with school inspectors and local authorities."

Adbourakhmane Mbengue,
School Inspector,
Ministry of Education of Senegal

Children at Osire refugee camp, Namibia

Integrating ICT into teaching and learning

Partners in Learning
Through our **Partners in Learning (PiL)** program, Microsoft works with national and local governments and educators to provide access to technology in the classroom, as well as resources and training to ensure ICT is implemented effectively.

Microsoft is partnering with education and government leaders to offer schools and administrators a wide spectrum of educational resources, tools, programs, and practices.

- **PiL grants** help create a sustainable model for improving the use of technology in teaching and learning.
- **Fresh Start for Donated Computers** provides primary and secondary schools with Microsoft Windows licenses for donated PCs. Through this program, we have assisted in the refurbishment and licensing of almost 1 million PCs.
- **The School Agreement Subscription Licensing program offers** academic pricing and reduced administrative costs for secondary schools.
- **The Train-the-Trainer program** facilitates education on ICT based learning for all subject areas and detailed content on learning/using technology in general.
- **The Innovative Teachers program**, is a secure, online portal where educators can come together to share classroom success based on high-quality professional learning resources and teacher-driven content.

Partners in Learning is already active in 15 African countries, reaching 21 million students. In West, East and Central Africa alone, approximately 14,830 Master Trainers are receiving training, who will in turn train a minimum of 10 fellow teachers.

Microsoft renewed its worldwide commitment to Partners in Learning in January 2008 with an additional five-year investment of $235.5 million that aims to triple the impact of the program's resources and training.

John F. Kennedy School for Girls and PiL Club, Senegal

The Lycee John F. Kennedy, a renowned school for girls in Dakar, Senegal, is home to a PiL Club.

Created three years ago to address a growing digital divide at the school, the PiL club helps students to meet after school or during weekends to share their interest in computing, use the Internet and teach other students.

"What we do in class is not enough. Here, we go on the Internet to get more information, we study and connect with other people," explains student Ndeye Marie Ndiaye.

The success of the PiL Club formed the basis of an affordable computing pilot to expand the use of technology in the school's classrooms. In partnership with Senegal's Ministry of Education and Asus, Microsoft provided 50 laptops loaded with Windows XP, educational content, Partners in Learning modules and digital literacy training.

By fostering social links and team work, the PiL Club also helps the students who come from different parts of the country better integrate in the school.

"Our challenge when students come to the school is how to best integrate them. Because many are in scientific studies we recommend that they go to the computer lab or even that they join the PiL Club. This is how they start to get training and get interested," explains Niang Ndach Faye, the school's Head Teacher.

The PiL Club at JFK secondary school, Dakar, Senegal

Innovative Teachers Forum
The Innovative Teachers Forums (ITF) are annual events that reward outstanding teachers from around the globe who incorporate the innovative use of technology in their classrooms. These teachers are visionaries in their field and are dedicated to 21st century teaching and learning.

The 2008 worldwide ITF, held in Hong Kong, recognized 3 teachers from Africa (Uganda, Senegal and South Africa) as top winners in their respective categories. In an event that encompasses 64 countries from around the world and 250 teachers, school administrators and education policy makers this is a great achievement.

Outstanding teacher, ITF 2008

South African innovative teacher Sarietjie Musgrave won second place in the 'Innovation in Community' category. Musgrave's project aptly called 'Spread the Sunshine' focused on her grade 10 class and challenged them to research various disabilities and come up with technological solutions to help the people with these disabilities.

Musgrave was amazed at the results. "We started by giving handicapped pupils in our school a chance to talk about their disabilities" says Musgrave.

Since then her 64 pupils have touched and helped the lives of over 300 people with disabilities from dyslexia to Down syndrome. One pupil's project used drawings on the computer to help a dyslexic pupil read and write.

Another project opened up a new world of communication to an eight year old boy who could not communicate. Pupils purchased a computer program of picture cards to help him be understood. Clearly computers were "no longer confined to the science or IT lab" says Reza Bardien, the Education lead at Microsoft South Africa.

"I never realized that I would be so affected by helping a disabled person," says Joani Bezuidenhout, one of Musgrave's participating students. "The project has given me a fresh set of confidence knowing that I am capable of making a difference. I can make a difference!"

Bill Gates at the 2007 Imagine Cup Finals

Innovation centers
Microsoft is also testing the latest technology and content solutions for schools through Schools Technology Innovation Centers (STIC), one of which opened in Johannesburg, South Africa in April 2007.

School Technology Innovation Centers provide interactive ICT demonstration facilities to help enable teachers and education decision-makers and administrators evaluate new technologies and share best practices on how to integrate ICT into learning environments.

These centers are designed to foster close collaboration with government and academic partners, as well as private sector partners including Hewlett-Packard, Cisco Systems Inc and Intel Corp.

Imagine Cup
The world's premier student technology competition, Imagine Cup is another way Microsoft is encouraging young people to apply their imagination, passion and creativity to technology innovations that can make a difference in the world today.

Now in its seventh year, Imagine Cup has grown to be a truly global competition focused on finding solutions to real-world issues, with more than 200,000 students from over 100 countries and regions in the world registering to compete in the 2009 finals in Cairo, Egypt.

With this year's theme for students to "Imagine a world where technology helps solve the toughest problems facing us today," the competition will focus on the United Nations Millennium Development Goals. Imagine Cup had close to 300 participants in 2008 and the top team from the East Africa region, represented by Uganda, attended the worldwide finals in Paris.

Government partnerships to harness ICT in education

Digital curriculum development
Microsoft is also working to bring local educational content into new ways of teaching by working with developers to adapt national curriculum.

Kenya Institute of Education
In 2006, Microsoft and the Kenyan Ministry of Education initiated a program to provide technical training to curriculum developers so that they can create interactive, multimedia content based on official current curricula.

The team of curriculum developers at the Kenya Institute of Education have already adapted Secondary Form 1 (9th grade) subjects – the first milestone in an initiative to ultimately deliver a multimedia curriculum for all primary and secondary levels.

This initiative not only helps to produce well-trained software productions professionals who are familiar with Kenya's needs, but also widens access to quality education.

"Now we are able to get to more learners because with the CDs we can distribute countrywide," explains Mugai Peter Kamau, one of the curriculum developers. "Now that the world is going electronic we don't have to be left behind. "

Managing the delivery of public education
To ensure quality, education has to be managed, administered and planned carefully by national and local authorities. Many countries however rely on a paper-based system to support this management, leaving room for error as well as inefficiencies.

To address this challenge, Microsoft, **Agile Learning Company** and the government of Rwanda have been working together since 2007 on the **Education Management Information System** (EMIS).

EMIS, developed by Agile, based on Microsoft technology, provides an easy to use tool that enables teachers, administrators and district managers to input data and relay it back to the Ministry of Education. Microsoft also provides technical expertise and in kind support including training programs and curriculum to users.

Mugai Peter Kamau, Curriculum Developer

Curriculum developers at the Kenya Institute of Education

"My aim is to empower the Kenyan teachers so that they are able to use the technology to deliver content that is more interesting and that can help improve skills,"

Simon Mwaura Njuguna, one of the curriculum developers.

EMIS developer in Rwanda

Whereas before, schools got questionnaires to fill out by hand, which were then collected physically in each district and brought to the ministry for the annual report, the platform will digitize this process.

Data stored includes information on the number of students in each school (for example, by age, by level, and by how many students have been promoted), grades, teachers, infrastructure, census etc, helping to ensure that resources are distributed according to the actual needs throughout the country.

"When we get the information we can take a decision as quick as possible and it will enable us to have a proper planning of our human capacity building," says Theoneste Mutsindashyaka, Rwanda's Minister of State for Education.

The program's rollout phase has been launched to provide the country's 5,000 schools with EMIS and relevant training by 2011. "It enables everyone to work smarter not harder and saves a lot of time, saves them money," Agile Learning Company's CEO James Curry states. "Now they can make the right decisions. And finally we are developing a culture that is evidence based."

II. Fostering Local Innovation

Innovation can come from the most humble origins and build up to bring about real change in the way people live.

Giving people, businesses and institutions in Africa the power to innovate, Microsoft supports wider technology access, greater local skills capacity and the development of healthy local software ecosystems to help Africans develop their own solutions to the continent's challenges.

Adapting to local technology challenges and supporting local software developers

Local language program
One of the important aspects for ICT uptake and skills development is making technology available in local languages. Microsoft has developed **language interface packs** that turn English-language Windows and Office into local languages.

Microsoft has worked with local governments, partners, and communities to ensure that the local languages are defined, standardized and agreed on by users of the language, resulting in consistent local terminology across components.

Microsoft Windows is available to users in:

- Afrikaans (South Africa)
- Amharic (Ethiopia)
- Hausa (Nigeria)
- Igbo (Nigeria)
- IsiXhosa (South Africa)
- IsiZulu (South Africa)
- Kinyarwanda (Rwanda)
- Kiswahili (East Africa)
- Sesotho Sa Leboa (South Africa)
- Tswana (Botswana, South Africa)
- Wolof (Senegal, West Africa)
- Yoruba (West Africa)

More than 100 million people speak Kiswahili. Through the Local Language Program, more than 90% of the Eastern African population has the opportunity to work on Microsoft Office in Kiswahili.

The Ogiek tribe in Kenya's Rift Valley

Windows Starter Edition
In 2006, we announced the launch of **Windows XP Starter Edition** for Africa, a streamlined version of Windows XP available at lower cost, customized for low cost PCs with less memory and localized support to be easy to use for first-time computer users.

Initially available in Botswana, Namibia, Nigeria and South Africa, this product has since been extended to more than 40 African countries with the launch of Windows Vista Starter Edition.

Local software economy development
Microsoft's success depends on its extensive partnerships with nearly 750,000 businesses worldwide—including independent software vendors, system integrators, resellers, and hardware manufacturers.

Through the opportunities that their partnership with Microsoft provides, these business—many of them small, local firms—fuel the growth of **local software economies**, contribute to the national tax base, and drive industry entrepreneurship.

Africa has a fast-growing range of software vendors, and we already work with over 2,400 partners in Africa. In South Africa alone, we work with over 400 Independent Software Vendors (ISVs), which in turn contribute close to US$620 million to the local economy.

Students in Dakar, Senegal

Microsoft Innovation Centers
As part of our efforts to support the local software economy, Microsoft provides research and development infrastructure in Africa.

The **Microsoft Innovation Centers (MICs)** give partners, students, and IT researchers a comprehensive set of programs and services for planning, researching, and developing innovative software solutions. The goal of the centers is to foster innovation and growth in local software economies.

In many cases, Microsoft and governments, universities and industry organizations jointly operate these facilities. To date in Africa, there are three MICs located in South Africa, as well two in Rwanda and one to open in Tanzania in 2009.

For example, the Interoperability Lab in Cape Town is the first of its kind for South Africa. It is a facility where Open Source and other platform solution builders, can test their software on Microsoft to ensure compatibility.

Supporting researchers in leading African institutions

Microsoft Research Inspire program

The **Microsoft Research Inspire Program** aims to establish and reinforce relationships between academics from developed and developing countries and to encourage exceptional students to embark on a research career.

There are three components to the program:
- a volunteer visiting researcher and lecturer program
- a research summer school travel award
- a PhD proposal award

As part of the visiting lecturer component, Microsoft enables academics to volunteer to teach computer science and train teachers in developing countries. A free online service matches universities in developing countries with researchers and lecturers from Europe or the U.S.A. who volunteer.

Under the PhD Proposal Award Scheme, Microsoft provides cash grants to encourage students to continue education to post-graduate level and become the next generation of computer-science researchers and lecturers in Africa.

Access to scientific information - Research4Life
Microsoft is the technology partner in **Research4Life**, a public-private partnership between the World Health Organization (WHO), the Food and Agriculture Organization (FAO), the UN Environmental Programme (UNEP), Cornell and Yale Universities and more than 340 different publishers including Springer-Verlag, Elsevier and Wiley-Blackwell.

Research4Life facilitates free or very low cost access to the latest advances and thinking in the areas of health, agriculture and the environment via an online platform.

It enables scientists, researchers, and policy makers in developing countries to train, conduct research, and make policy while referring to the latest knowledge.

Research4Life key facts

- Access to 7,500 peer-reviewed scientific journals, books and databases
- Available in 108 countries at low or no cost
- 3 channels:
  HINARI – health research (supported by WHO)
  AGORA – agriculture research (supported by FAO)
  OARE – environmental research (supported by UNEP)

Benefits of the program include:
- A strengthened intellectual foundation for university researchers
- More science-driven public policies and regulatory frameworks
- Increased participation of experts from developing countries in international scientific and policy debates
- An enhancement of the status of libraries

Creating sustainable watersheds in Kenya

The SUMAWA project illustrates the impact of Research4Life on communities. The Njoro River watershed in Kenya's Rift Valley has come under increasing pressure from a rapidly growing human population. Local researchers at Egerton University witnessed the devastation first-hand and began to take action.

They launched the SUMAWA project based on information and methodologies found through OARE to support the local community.

Among these, researchers developed sand filters using local materials to provide the community with access to clean water. Local public health authorities credit the filters with a steep drop in water-borne illnesses among the Rift Valley's 300,000 residents.

The SUMAWA project also includes community-specific programs such as installing livestock troughs specifically designed for cattle, to separate them from the wells used by the human population, and establishing a school tree nursery program, to teach the importance of sustainability to younger generations.

OARE lab at Egerton University, Kenya

"The research we have conducted is very relevant because it has a direct impact on the farmer, direct impact on that individual person who lives in that watershed,"

James K. Tuitoek,
Vice-Chancellor of Egerton University.

SUMAWA support to separate human water troughs from cattle troughs

"It's quite amazing the difference the e-Parliament solution has made – not only in the operational and day-to-day activities of the parliament, but even when they are debating a particular piece of legislation. The transition to electronic is making a huge difference."

Romain Murenzi,
ICT Minister, Rwanda

Rwandan Parliament in Kigali

Enabling governments to innovate through ICT

Underlying all successful development is social and political advancement. Once citizens have access to education, are skilled and knowledgeable, their participation and contribution in the political system can increase.

Infrastructures must be put in place to ensure communication and collaboration among citizens with their government, and applications are needed to deliver on the breadth of services expected.

eGovernment initiatives

South Africa
In South Africa we are working with government departments at local, regional and national levels to develop a more responsible procurement process for ICT solutions and a more rapid adoption of e-Government solutions, so that the local software market can develop.

In order to achieve this we have conducted and partnered in forums with local and regional government around the country in skills development, internships and placements for graduates countrywide; research and innovation collaboration with local NGO's; and in technology and business mentoring at our Innovation Centers.

Partnership with Rwanda and NEPAD – ICT plan and eParliament
We are also working with NEPAD to implement an e-Parliament solution in Rwanda. We are providing laptops with Internet connectivity to all members of parliament, a server and internal and external websites to allow for greater information sharing and efficiency. To date 180 laptops have been distributed.

The e-Parliament initiative has introduced ICT to six Parliaments across the continent including the Pan-African Parliament. Now in Rwanda both upper and lower chambers have Internet connectivity and communication with parliament even when they travel.

Other benefits include:
- A reduction in the use of paper and a more transparent system
- Easier access to legislation and government documents – before government leaders had to go to the library, now they can log on. For example, the sites enable users, for the first time, to search the constitution online
- Greater efficiency – for example, during parliamentary sessions the internal website keeps track of attendance and the agenda

Promoting coordination on environmental information with UNEP

Microsoft has been working with the UN Environmental Programme (UNEP) and governments to develop integrated knowledge platforms on the environment.

For example, in collaboration with the Clinton Foundation, Microsoft is delivering a free software tool called **Project 2°** a tool for cities to measure and reduce greenhouse gas emissions.

The application enables city officials to calculate the carbon footprint of both municipal operations and their communities uniformly, and use this information to enhance planning and decision making for meaningful climate action and savings. It also helps users reduce and manage their energy consumption. Cities around the world have been offered the opportunity to begin using Project 2°, including Lagos (Nigeria) and Addis Ababa (Ethiopia).

Microsoft is also working with governments to build **National Environmental Information Infrastructures (EII)** portals that help IGOs, NGOs and authorities share and interpret data for the country, to better manage environmental programs and response.

ICT Capacity building for development

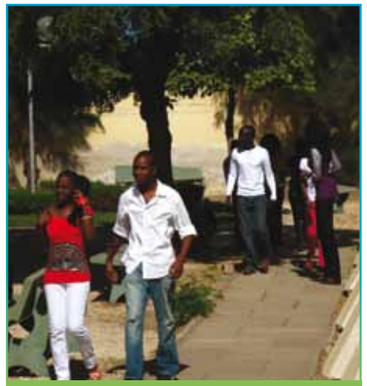
CESAG government training program – Senegal

At the Centre Africain d'Etudes Supérieures en Gestion (CESAG), a regional school of management for West and Central Africa based in Senegal, Microsoft has introduced **training for government leaders and decision makers** in the ICT field.

The program aims to help government officials make more informed decisions about ICT policy by examining the impact of ICT on social and economic development through topics such as privacy and intellectual property rights.

The first phase of the program was delivered in November 2008 and reached out to 25 trainees, who will also themselves become trainers and advisors for their peers. In the future, CESAG plans to expand the program so that it becomes a regional center.

"I now have the opportunity to help decision makers understand better how internet works today, what changed, why they must take into account these elements in their political decisions," Ndeye Nainouna Diop Diagne, Director of ICT in the Ministry of Information, and one of the trainees.



Students on the CESAG campus, Senegal

COBL visit in Africa, March 2009

Council of Business Leaders (UNHCR)

Along with other private sector partners including Nike, Manpower, PriceWaterhouseCoopers, and WPP, Microsoft is a founding member of the **UNHCR Council of Business Leaders (CBL)** launched at the World Economic Forum in Davos in January 2005.

The Council aims to catalyze innovative public-private partnerships, better coordinate corporate investments and help UNHCR find new sources of private sector funding.

Through trips to refugee camps, CBL partners gain a deeper understanding of the challenges and collectively identify areas where public-private partnerships can support UNHCR's goals. In March 2006, the Council of Business Leaders, including Microsoft and Nike visited UNHCR camps in Kenya, Tanzania and Burundi to gain insight on further areas for partnership in the future.

In March 2009 the CBL studied the challenges of rural integration and protracted refugee situations in South Africa, Namibia and Mozambique.

The CBL learned firsthand how the Microsoft based **ProGres** refugee registration system is helping UNHCR and the government of Mozambique manage a successful integration program that includes Microloans, skills training and education programs.

ProGres, jointly developed with the UNHCR and an independent software vendor in Geneva, has been supported by more than 70 Microsoft volunteers. Currently the system stores information on 5 million refugees in 72 countries throughout 300 refugee camps, the majority of which are in Africa.

ProGres registration in use in Namibia

ITU Global View for Development

In collaboration with the International Telecommunications Union (ITU) Microsoft has developed an online flagship ICT4D visualization application called **ITU Global View for Development** to support the international development community track progress and project areas.

The tool integrates and makes easily viewable ITU's existing data sources of global ICT4D accomplishments to date. ITU Global View visualizes GSM mobile and ICT indicators by topics throughout Africa with the ability to compare them and to analyze trends, progress and consider potential future development.

The online platform is open to all stakeholders including governments, industry, international and regional organizations, as well as civil society, allowing users to coordinate efforts to achieve the WSIS goals.

ITU Global View – Internet usage mapping

NGO Empowerment program

Non-governmental organizations and civil society organizations, including grassroots and village organizations, associations and other citizens' groups, are key agents of change for Africa's social and economic development.

However their technology resources are often limited. Microsoft works with local partners to launch the **NGO empowerment program**, to help them better leverage ICT tools to support their work.

In particular, through the NGO ICT4D Academy, support focuses on three critical areas:

- ICT4D skills development – Information, resources, tools and training on topics ranging from IT management to ICT4D solutions
- IT support services - IT services to assist with the development of technology plans and facilitate access to NGO technical assistance providers
- e-Readiness - Tools, training and planning guidance for organizations to develop ICT plans and meet national e-readiness standards

Microsoft also launched the NGO Connect website and portal where access to news, resources and events in the NGO community provide a forum and virtual workspace for NGOs to share ideas and best practices across Africa.

III. Enabling Jobs and Opportunities

The right tools and partnerships can help people connect to valuable skills and new jobs, and help businesses run and grow. In partnership with governments, NGOs, local businesses, and academic institutions, we are working to help foster entrepreneurship, stimulate foreign direct investment and bridge the employability gap.

Students at Ndarugu Primary School, Kenya

ICT Skills programs for underserved groups

Community Technology Skills program

Microsoft's Unlimited Potential **Community Technology Skills Program (CTSP)** is a cornerstone of the company's community investment efforts, providing ICT training and tools that foster social and economic opportunities.

In Africa, CTSP has worked with 40 non-governmental and inter-governmental organizations, and 900 local partners. This has provided resources to more than 1,000 Community Technology Centers (CTCs) in 43 countries and impacted over 5 million people across Africa and the Middle East.

The majority of these projects are designed for enabling and equipping the next generation of African youth and women. CTCs can be found in remote villages and in the hearts of cities, providing skills training and employment support.

Youth Empowerment Program

In May 2007, Microsoft announced a joint **Youth Empowerment Program** with the International Youth Foundation to enhance sustainable employment opportunities in Kenya, Nigeria, Senegal, and Tanzania.

The program aims to improve the employability prospects of disadvantaged African youth aged 16 to 35 through ICT skills training.

In its initial stages, the program will reach 40,000 young people. It will develop tailor-made solutions to identified needs in local markets and combine ICT training with life skills and entrepreneurship training that match the real-world demand of local markets.

It is estimated that 70% of the trained beneficiaries from these targeted programs will go on to participate in internships, be placed in jobs, gain income-generating self employments, or engage in voluntary service.

Computer literacy for women in Kenya

In Kenya, Microsoft has developed the **Computer Literacy initiative** to empower urban women in Kenya to participate in income generating activities through increased computer literacy.

The training curriculum incorporates teaching economic and business basics in order to enable women to develop their own micro-enterprises. The aim is to increase the scale of computer training facilities in Kenya, with the eventual goal of offering training free of charge to women and young girls.

Community Multimedia Centers in Mali, Mozambique and Senegal

As part of our work with the UN Educational, Scientific and Cultural Organization (UNESCO), we help support local **Community Multimedia Centers (CMCs)** in Mali, Mozambique and Senegal by upgrading the community radio facilities through the provision of computers, training and multimedia curricula.

CMCs offer residents services like photocopying, printing and typing and other local government services. Alongside its role in providing access to information, the centers have become a unique space for expression and discussion in their communities.

In Senegal, during the program's two and a half years, 24 CMCs have been established in all 11 regions of the country, the majority in areas of greatest isolation and poverty. Mozambique, the second country to benefit from the program, currently has 20 CMCs in operation while Mali maintains nine centers.

The program is part of UNESCO's broad effort which aims to create 50 CMCs in each country. In many communities, the community radio station is a vital and informative source of news and knowledge on a diverse range of topics including health, market prices, safety, and education. It has also helped to increase the technical and teaching skills for community-level trainers.

Student2Business program

Microsoft also launched the **Student2Business program (S2B)**, designed to connect Microsoft partners and customers with qualified students for entry-level and internship positions.

The program aims at reducing unemployment in youth communities specifically focused on ICT and business related graduates in South Africa. The S2B team maintains a dedicated portal marketed for student registration through attending open days at universities, and participating in community youth days.

In addition to matching students with employers, S2B is comprised of special training programs, mentoring and certification opportunities to help graduates meet required skills needs and become more employable.

In its first year in South Africa, the program helped more than 1,000 graduates find employment.

Partnerships to support local small businesses and organizations

To foster the jobs and growth that will underpin a more competitive and sustainable African economy, we are engaged in a broad range of partnerships with governments and inter-governmental organizations.

Working with partners such as the United Nations Industrial Development Organization (UNIDO), and the United Nations World Tourism Organization (UNWTO), we are building capacity for SMEs, entrepreneurs and other underserved business communities to enable development.

Weavers and potters prepare goods for the export market, Ethiopia

Access to business skills training and support

In Uganda, Microsoft supports the UN Industrial Development Organisation (UNIDO) in the establishment of **District Business Information Centers** (DBICs) in rural districts.

DBICs provide integrated business information solutions to MSMEs (Micro, Small and Medium Businesses) so that they can be more competitive and successful, in turn driving income generation and local employment.

The centers also offer entrepreneurs tailored training, fast and reliable access to the Internet to improve their efficiency and day-to-day business activities, and work closely with the Uganda Green Computer Company to provide access to hardware.

Access to hardware and software

Uganda Green Computer Company
A cornerstone of the local economy in Africa, SMEs often lack access to affordable hardware, relevant software and adequate ICT training, in turn affecting their ability to expand.

To address this need, UNIDO and Microsoft created a joint initiative to make secondary PCs available to SMEs in Uganda in a safe and sustainable way. In June 2008, the partners supported the opening of the **Uganda Green Computer Company**, a local computer refurbishment centre.

Based in Kampala, the centre refurbishes and sells 10,000 secondary computers per year at a retail starting price of US$175, one third of the price of a new PC. The computers are sold to local businesses and are delivered with a full computing solution, complete with genuine Microsoft Windows XP software, a one year warranty, after sales support and ICT training.

Microsoft and UNIDO are also working on upgrading existing computer dismantling facilities into complimentary regional e-waste recycling facilities that can provide zero landfill recycling of e-waste.

"Access to affordable PCs will help SMEs increase their productivity, share information, grow their business, create local jobs and ultimately help make Uganda a more competitive, knowledge-based economy."

Hon. Dr. Ham-Musaka Mulira, Minister of ICT, Uganda

Computer refurbishers at the Green Computers Company

Refurbished PCs support the creation of small businesses

SAVENET SACCO, a Savings and Credit Cooperative Society in Jinja, Uganda, helps the local community deposit savings and gain access to microfinance to start their own small businesses.

It currently keeps the savings of 180 local residents on a recently purchased computer from the Green Computing Company.

Using the computer, Lillian Ezaru, Manager of SAVENET SACCO, now issues a monthly report on savings and outstanding balances for borrowers – compared to every 4-5 months previously – helping them to better track their finances and serve their customers.

"Before we used to do all of our work manually, but now with this computer we are more efficient and can provide better services to our customers. This computer has changed our lives," she says.

Lillian Ezaru,
Manager of SAVENET SACCO

MAR Program

The Green Computer Company Uganda is part of the **Microsoft Authorised Refurbisher (MAR)** program, another Microsoft Unlimited Potential initiative, which licenses eligible refurbishers to install Microsoft operating systems on donated computers for community and education recipients.

Research has shown that millions of working PC's just sit in storage, whilst millions of people remain unable to access computer technology.

Through MAR, the goal is to increase the number of donated and low-cost computers available to eligible charitable organizations, academic users, and other relevant recipients.

New PC acquisition models – Partnership for Technology Access

Microsoft has been working on a new pay-as-you-use model for PC ownership in emerging markets as part of Microsoft's Partnership for Technology Access program (PTA). PTA helps governments to deliver technology solutions to underserved communities through public-private partnerships.

In Nigeria, we worked with the government to develop the "Computers for All Nigerians Initiative." Starting with civil servants, this program provides a credit guarantee that allows people to spread payments for PCs over 24 months. It is hoped that the program will be used by up to 500,000 citizens in the next two years.

Ethiopian flowers bound for Europeans markets

Coffee ready for export in Addis Ababa, Ethopia

Senegal – Repurposed telecenters

The government of Senegal sought to improve the operating conditions and the business environment for 15,000 telecenters challenged by the changes in the telecommunications market and going out of business at a rapid rate.

Microsoft partnered with the Senegalese government and local companies to share its PTA implementation model, and support the telecenters through products and services resources (business plan, marketing, operations).

As a result, 30,000 jobs from the bottom of the economic pyramid related to the telecenter activity will be saved. The project is also helping the government meet its goals to provide universal ICT access in Senegal.

Connecting Africa to international markets

AfrIPANet (UNIDO)

Microsoft has been supporting UNIDO in the development of the Africa Investment Promotion Agency Network (AfrIPANet) initiative. By enabling access to UNIDO's survey-based data on sectoral growth and key investment information, AfrIPANet supports national investment promotion agencies (IPAs) in Africa.

The web-based interactive portal provides detailed information on foreign investors and domestic enterprises in more than 25 countries in sub-Saharan Africa. More than 12,000 companies are participating in the network.

IPAs are also able to monitor trends in investment flows, evaluate the effectiveness of interventions on investor behavior and target and support quality investors.

Facilitating international trade

Africa's international trade is an important means of fostering development and generating opportunities on the continent. However, as global trade becomes more complex, so have the safety concerns that accompany the crossing of borders.

Many of the world's largest developed markets have reinforced the requirements and quality checks that foreign goods must meet, as well as the procedures they must follow to address safety concerns. For example, the US and EU are in the process of implementing new regulations stipulating that all import and export transactions must become paper-free.

EU-Africa trade

- Africa accounts for 9% of EU27 imports and 8% of exports
- Between 2000 and 2006, EU exports of goods to Africa rose from €66 billion to €92 billion, while imports increased from €85 billion to €126 billion

Source: Reuters EU-Africa 2007 Trade Statistics, European Commission

Microsoft worked with Ireland-based developer **TradeFacilitate** to develop a solution to ensure accurate and paperless transactions with other markets. The platform is an easy-to-use interface that updates existing customs and trade systems.

"The key data is put into one electronic format which can save on average up to 3.8 hours per consignment for SME exporters," says Conor O'Riordan, CEO, TradeFacilitate. The solution is currently under pilot in Ethiopia.

In Senegal, another example of the innovative use of technology in trade was undertaken by Gainde2000. Based on Microsoft technology, **Gainde2000** developed **ORBUS**, a paperless, 'Single Window' solution, and **TradeX**, a customs solution, to facilitate preclearance formalities. ORBUS is currently a mandatory system for many Senegalese organizations and is used in 20 government agencies to link banks, exporters, importers, customs authorities and insurers to the same platform.

RFID Cattle tracking in Kenya

A Microsoft-based solution, developed by the Kenyan company **Virtual City Ltd.**, is beginning to transform Kenya's cattle industry by fostering greater transparency, accountability and efficiency in the tracking of cattle and the processing of source of origin data for EU exports.

As part of its trade regulation, the EU implemented a food safety requirement in 2002 stipulating that all food goods sold in EU countries must be traceable to their original producers in a database designed to act as a rapid response warning system able to identify potential sources of health hazards.

Virtual City developed an animal identification, traceability, and quality verification system called the Livestock Identification Traceability System (LITS) based on a Microsoft technology platform.

Through LITS, every cow is tracked using a unique **radio-frequency identification (RFID)** device inserted in its second stomach, which assigns an individual number to each animal. The device includes important information on the cow including its origin, all previous owners, and medical history as it moves through the livestock producing chain.

"A lot of the cattle in Kenya are held by pastoral farmers who are not IT literate," said John Waibochi, CEO,Virtual City Ltd. He added: "We needed to find a way to track a product that is constantly on the move while making it relevant for the farmers so they don't feel that they are changing anything too fundamental."

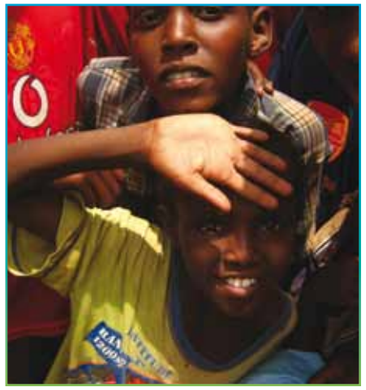
ORBUS support office, Dakar, Senegal

The RFID cattle database

RFID tracking device being inserted

ENGAGEMENT PAPER AFRICA

Impact and Innovation through Partnerships



Through Unlimited Potential, we have aligned the company's technologies, partnerships, business and corporate citizenship efforts in a concerted effort to bring the benefits of information technology to people who are under-served today.

Our programs in Africa represent some of our broadest and best uses of technology, in partnership with regional and local actors, to support social and economic development.

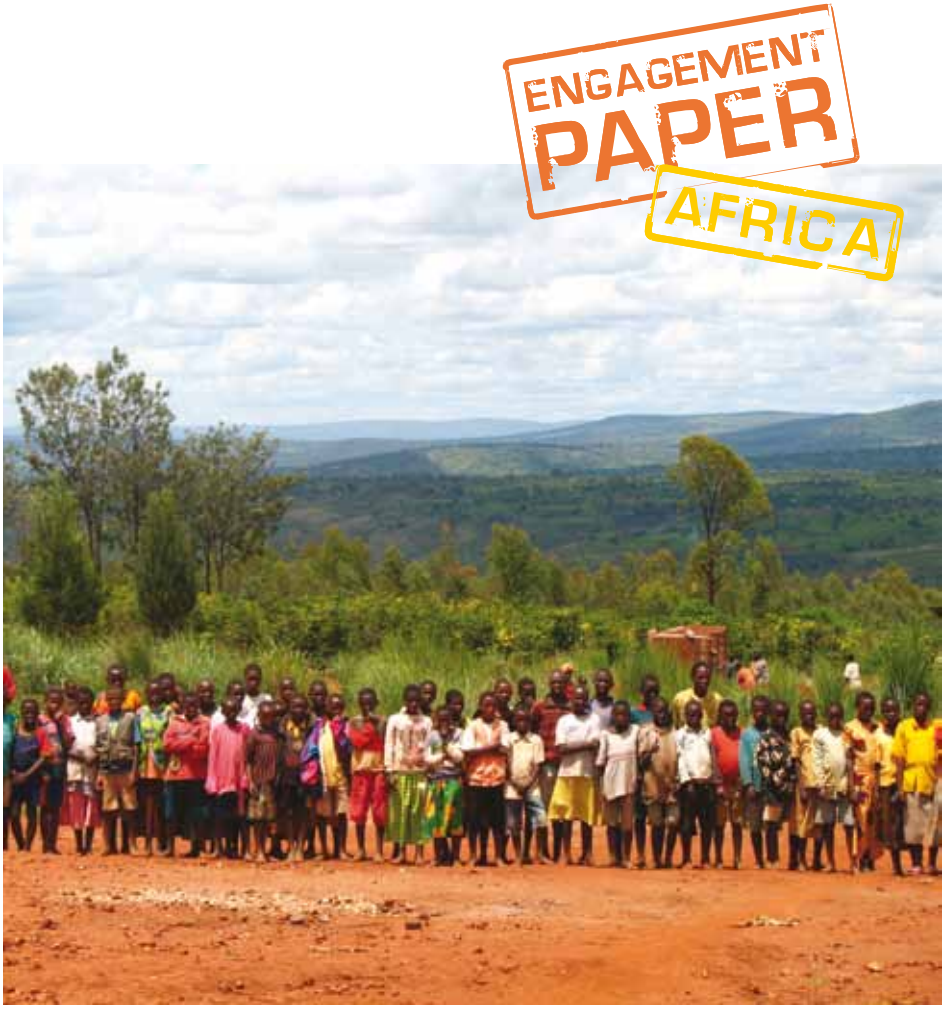
While Unlimited Potential is making a contribution to bringing the benefits and opportunities of ICT to Africa, we are also aware of the progress that remains to be made to fully integrate Africa into the knowledge economy.

As we continue to build on our engagement with governments, organizations and communities in the region to further expand our impact, we believe that two areas require particular focus:

- Supporting African governments as they work to provide affordable access for their citizens to the Internet to enhance access to services, knowledge sharing and transparency;
- And helping to identify proven best practices for development funding to bring more successful ICT4Development projects to Africa.

We will work to ensure that these areas are considered in future programs. By bringing our expertise, experience and resources – as well as those of our partners – to address development challenges in Africa, we will continue to support the drive towards bridging the digital divide through impact and innovation.

Motor-taxi owner, Kenya



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