

# Building e-competence:

Enabling small business to access opportunities through Information and Communication Technology



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION



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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION  
VIENNA, 2008

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“Information technology plays a key role in fostering development. Governments, civil society, the private sector, academia and others must join forces to promote new business models, public policies and technology solutions in the global approach to development.”

Ban Ki-moon  
United Nations Secretary-General

# Connecting the developing world with the information revolution

Foreword by the Director-General of UNIDO,  
Dr. Kandeh K. Yumkella

We are now midway to the target date of achieving the Millennium Development Goals. Clearly, there is much work yet to be done. But some progress has also been achieved.

It is crucial to recognize the untapped potential for Information and Communication Technology-driven economic and social development throughout the developing world. As never before, developing countries have the opportunity to build on this potential to empower marginalized populations and communities to improve productivity and employment generation and thereby reduce poverty, particularly in rural and remote areas.

Indeed, ICT is not only transforming the way we live, work and interact. It is also critical in the achievement of key goals for development. At the World Summit on the Information Society in 2003 and 2005, world leaders recognized the significant role of ICT as a catalyst to help achieve the UN Millennium Development Goals.

As the UN specialized agency for industrial development, UNIDO focuses, as part of its overall mandate, on building and strengthening local capacities through the use of ICT applications. The provision of ICT is not an end in itself. ICT is an important enabler, a tool, to make

up-to-date information and knowledge more widely available throughout the developing world.

Encouraging the use of innovative ICT solutions among small and medium enterprises is one way of creating a dynamic bottom-up process of economic development. Another is to engage global business players to form effective linkages and broader partnerships for development.

UNIDO is working in partnership with transnational corporations and public sector agencies to overcome the 'digital divide'. Together, we aim to make the productive use of ICT by small and medium enterprises in the developing world a reality.

As part of our strategy we promote opportunities for local economies in computer refurbishment, e-waste recycling, software development and renewable energy. And we have a particular focus on ICT for youth and women entrepreneurship development.

Harnessing ICT to generate wealth in a manner that is socially and environmentally responsible – and thus sustainable – must be a common goal of the international community. It is UNIDO's goal. I encourage you to join us in our efforts.





“An individual poor person is an isolated island by himself and herself. Information Technology can end that isolation overnight.”

Prof. Muhammad Yunus  
Founder and Director of Grameen Bank, Bangladesh

# 1: ICT for small & medium enterprise development

## Widening the horizon for SMEs

Small and medium-sized enterprises (SMEs) are the driving force of industrial development in virtually all countries. They shape the economic globalization process and play a leading role in creating employment, income and value added services, as well as being the seedbed for developing and testing entrepreneurial talent.

The challenge in many developing countries is to combine the SMEs' employment potential with increasing productivity. This means shifting from low-value, price-driven to higher-value, knowledge based services. To prosper, SMEs need an environment that facilitates growth, including easy access to business information and ICT.

There is a direct link between access to ICT and growth in the SME sector: ICT offers essential tools to acquire, store, process and disseminate information, as well as the ability to generate knowledge. When used by small business, ICT can:

- Spur innovation and entrepreneurship
- Increase productivity and efficiency of business operations
- Provide relevant business development services
- Facilitate linkages to local, regional and international markets
- Enable access to new technologies and sources of finance



*“The key to realizing Africa’s great potential will be the creation of public and private sector partnerships. It is only by harnessing the expertise and entrepreneurial spirit of the business community that we can achieve a bold vision for a new Africa.”*

Dr. Bamanga Tukur,  
Executive President of  
the African Business  
Roundtable



## Regions

| Personal Computers (PCs)<br>per 100 inhabitants   | Internet Users per<br>100 inhabitants  | Mobile Subscribers<br>per 100 inhabitants   |          |
|---|--|---|----------|
|  2.17  |  4.76  |  20.97 | Africa   |
|  6.42  |  11.57 |  29.28 | Asia     |
|  35.35 |  37.02 |  61.95 | Americas |
|  30.69 |  35.73 |  94.29 | Europe   |

Source: ITU World Telecommunications/ICT Indicators Database 2007.

# A revolution unplugged?

In most developing countries the SME sector is suffering from inadequate ICT access in terms of content, application, services and infrastructure. ICT penetration remains low, expensive and ICT services are not provided in an integrated manner. This makes it difficult for SMEs to reap the benefits that ICT can bring. The barriers to SMEs employing ICT include:

## Lack of affordable access to ICT

Equitable and affordable access to ICT infrastructure and services still constitutes one of the main challenges of the Information Society:

- Low-income countries accounted for less than 1 per cent of total global broadband subscribers in 2007
- The cost of broadband Internet access in Africa is on average three times higher than in Asia
- Quality hardware and relevant software remain unaffordable for most SMEs in developing countries

## Lack of ICT knowledge

Small businesses cannot effectively use ICT if they are unaware of the potential benefits these new tools can bring to their lives:

- In sub-Saharan Africa, more than 70% of the population has never heard of the Internet
- Most people in developing countries lack the basic ICT literacy and computing skills
- Local software developers in developing countries are constrained by a lack of computer hardware and a lack of access to affordable high-speed Internet connectivity

## Lack of tailor made ICT solutions

More attention needs to be paid to suitable content, applications and services to ensure that “grassroots innovations” cater to the needs of the poor:

- Developing countries are becoming mere consumers rather than producers of locally relevant information
- Indigenous digital or electronic content is often very limited but crucial to unleash local skills and assets
- Locally relevant applications require highly specialised local software development skills



*“The linking up of Africa to the world is not a luxury. It is not simply in the interest of Africa; it is in the interest of the entire world.”*

H.E. Alpha Oumar Konaré, former President of the Republic of Mali



“The number one benefit of information technology is that it empowers people to do what they want to do. It lets people be creative, productive and learn things they did not think they could learn before, and so in a sense it is all about potential.”

Steve Ballmer  
CEO, Microsoft

## 2: UNIDO's core ICT programmes

### Business Information Centres

#### The challenge: making Information and Communication Technology accessible to rural SMEs

In many developing countries relevant business information is difficult to obtain. It is often outdated, only available from isolated institutions and not tailor-made for the information needs of rural entrepreneurs. Concurrently, ICT, as a means of accessing relevant information, is often unavailable and unaffordable for SMEs.

#### Our approach: harnessing ICT for small entrepreneurs

The main objective of the UNIDO Business Information Centres (BICs) programme is to use ICT and relevant business information for the development of local entrepreneurial skills. Through the programme we aim to promote local private sector competitiveness by increasing productivity, industrial innovation capacities and employment generation.

The BICs are usually set-up as a joint venture between public and private sector institutions and provide a central access point for SMEs. They cater, on a demand-driven and self-sustainable basis, to the needs of SMEs. BICs offer entrepreneurial advisory services, access to relevant business information and reliable Internet, technology and ICT training, as well as assistance in establishing linkages to local, regional and international markets.

#### Principles of UNIDO's assistance:

- **Strategic focus:** Sub-Saharan Africa and countries with special needs are the main beneficiaries of UNIDO's technical assistance
- **People-centred:** The approach starts with the analysis of the disadvantaged targeted population groups, such as rural populations, women and youth
- **Locally specific:** No blueprint design for ICT development is possible. Existing methodologies have to be carefully adjusted to local conditions
- **Analysis of absorptive capacities:** Projects are designed on the basis of the capacity of the targeted beneficiaries to absorb technical assistance
- **Gender sensitive:** UNIDO assistance addresses gender issues to narrow the gender-gap in access to ICT
- **Sustainability, scalability and replicability of initiatives:** BICs are designed to be self-sustainable and based on scalable and replicable business models
- **Asset-based:** The projects seek to harness locally available knowledge and expertise through the promotion of a 'training of trainers' approach



*"SMEs form the cornerstone of our local economy. By helping to empower them with access to affordable computer hardware, training and entrepreneurial opportunities, we will be taking steps to build a sustainable future for our economy."*

Honourable Dr. Ham-Mukasa Mulira, Minister of Information and Communications Technology in Uganda

# Changing lives: seeds for innovation

“I can add value to my business and enhance my income opportunities.”

Charles Turimurugendo is currently engaged in mixed farming, including a crop of Aloe Vera. This crop was introduced to him in 2003, but when it was ready two years later there was no market: the association which had mobilised Charles and other farmers in the community to cultivate Aloe Vera in the first place, never returned.

“During the process of looking for a market to sell the crops I came up with the idea to not only sell the crops but to also process the Aloe Vera leaves. By making products out of this essence, I can add value to my business and enhance my income opportunities.”

When Charles learnt that there was a Business Information Centre located in Jinja Municipality, Uganda, he went there to access information concerning micro finance services.

He quickly realized that the Centre also provided information related to many other types of businesses. He was able to access information on machinery and equipment and research the number of farmers in the area who could form a cooperative, selling Aloe Vera plants and its products.

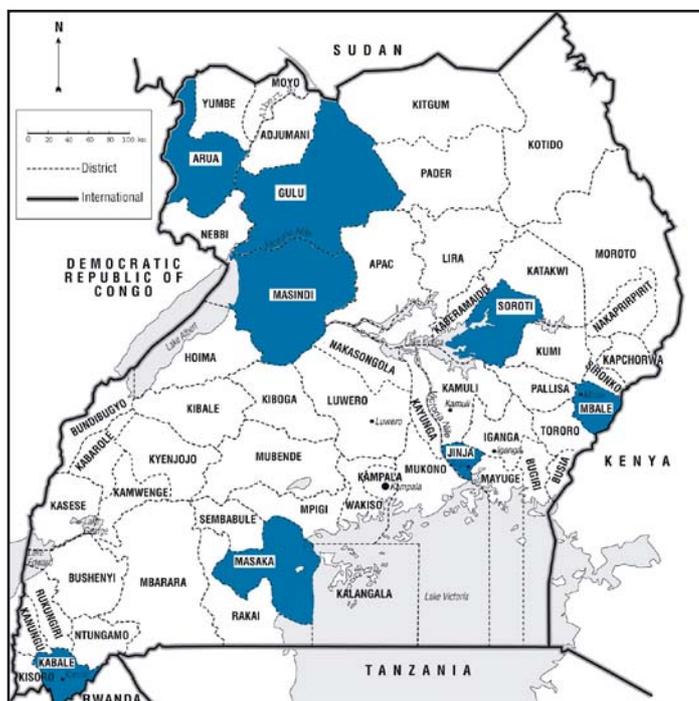


*Mr. Charles Tulimulugendo in his Aloe Vera Plantation*

# The concept applied: Business Information Network in Uganda

In Uganda, access and usage of ICT is very low: there are about 17 Internet users per 1,000 people and only 16 out of 1,000 have a personal computer (ITU, 2008).

UNIDO, with funding from the Austrian Development Agency (ADA) and in close cooperation with local public and private sector representatives, has developed a network of Business Information Centres in eight Districts of Uganda, namely Arua, Gulu, Jinja, Kabale, Masaka, Masindi, Mbale and Soroti.



*Business Information Centres in Uganda*

To further broaden the scope of services that the Business Information Centres provide to local entrepreneurs, UNIDO has joined forces with Microsoft to:

- Provide access to affordable quality hardware and relevant software through a local computer refurbishment initiative that responsibly addresses the entire life-cycle of computers
- Promote the local software economy
- Expand relevant ICT- related services and training for the rural business community



*“UNIDO and Microsoft have sent a blessing to Uganda. This is one opportunity we have got to seize and run with.”*

Mr. Patrick Bitature,  
Chairman of the  
Ugandan Investment  
Authority, (UIA)

*“Africa today is gaining experience and capital from the international investment arena and bringing that expertise back home to plough into local markets. I extend my warmest congratulations to the winners.”*

Chairman of the judging panel, Dr Bamanga Tukur



**A** africainvestorawards2007

# UNIDO and Microsoft win Africa Investor Award

On 7 November 2007, UNIDO and Microsoft won the Africa Investor Award 2007 in the category “Best Initiative in Support of SME Development” for the Austrian Development Agency funded Uganda Business Information Centre project. The African Investor Award, an international benchmark for excellence in responsible investing in Africa, recognizes and rewards innovative development projects initiated by the private sector, governments and NGOs.

The judging panel, chaired by Dr. Alhaji Bamanga Tukur, Chair of the NEPAD Business Group and Executive President, African Business Roundtable (ABR), included: Dr Ken Kwaku, Special Advisor to Former President Mkapa; Ms Arunma Oteh, Vice President, Corporate Services, African Development Bank (AfDB); Mr Amir Dossal, Executive Director, United Nations Fund for International Partnerships (UNFIP); Dr. William Kalema, Chairman, Uganda Investment Authority (UIA); Dr Joe Wanjui, Chairman, UAP Insurance, Kenya.



*Receiving the award, left to right: Mr Chinenye Mb-Uzoakwu, Country Manager, Microsoft; Ms Jummai Umar, Citizenship Manager, Microsoft; Mr Francis Ukoh, Expert on Business Information Networks, UNIDO*

# Exploring innovative approaches: Project Silverback

## The challenge: marginalized rural communities

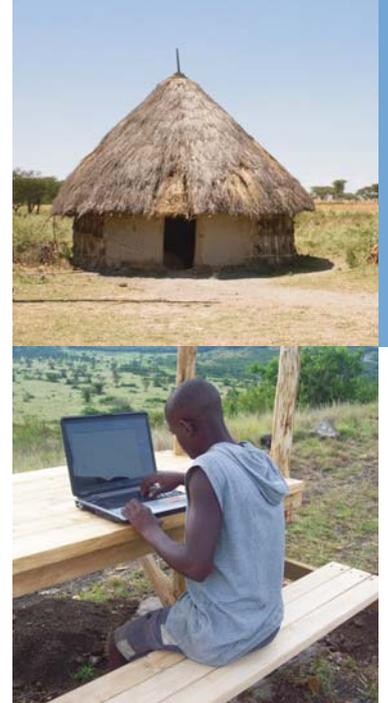
ICT services are often concentrated in towns while the majority of people live in small communities spread-out across vast rural areas. Low ICT penetration in combination with a lack of specialized human resources can result in reduced opportunities for small businesses and communities, thereby increasing the risk of further marginalisation.

## Our approach: increased internet outreach

In 2004, Conservation Through Public Health (CTPH) in partnership with UNIDO, the Uganda Communications Commission, the World Bank and other local and international partners, set up the first solar-powered community telecentre to address the problems of poverty, isolation, poor health practices, lack of knowledge on sustainable environmental practice and limited access to education in and around Bwindi Impenetrable National Park, Uganda.

Building on the success of the existing telecentre, UNIDO, Microsoft and CTPH are joining forces to increase the outreach of the Internet, educational and business services to local individuals and small entrepreneurs in the surrounding region.

CTPH employees, equipped with laptops, visit villages and offer commercial and non-commercial offline services including education and training. By night they return with the laptops to the telecentre to synchronize email and upload other content, thereby bridging the remaining digital gaps.



*“Our Business Information Centers have been successful in helping small business in semi-urban areas to use ICT for the development of entrepreneurial skills, access to relevant business information and linkages to markets. We are looking forward to extending this success to rural locations.”*

Barbara Kreissler,  
Industrial Development  
Officer, UNIDO

# Promoting local vocational training through ICT

“By promoting my school on the worldwide web, I can attract even more women to attend my classes and learn a profession!”

Lilian Sansa is the owner of the Twegemekotile School in the Katindu Community Centre, where she teaches young women in dressmaking and hand loom weaving.

Along with her partners she plans to develop the school further to expand its capacities and attract even more women to attend the classes.

In the local UNIDO Business Information Centre, Lilian Sansa found the support she needed to promote her school and is now planning to take the initiative one step further.

“With the assistance and support I receive in the Business Information Centre, I am now thinking of creating my own website for our Development Centre. I am convinced that this would help us a lot in promoting our centre and our school to bring it closer to young women who want to learn a profession!”



# Enabling women to connect

## The challenge: “engendering” ICT

Increasing women’s access to ICT entails confronting numerous wider issues, including literacy, education and the social and cultural norms that constrain women’s access to ICT around the world.

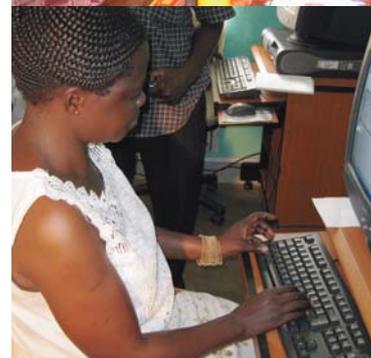
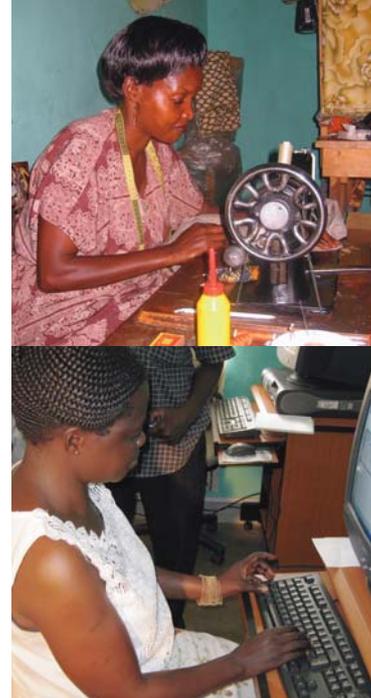
With limited access to schooling, women, especially those in rural areas, are less likely than men to have computer skills. In Africa women have the world’s lowest participation rates in science and technology education at all levels.

Promoting ICT calls for particular attention to be paid to gender issues, in particular reducing the gender-gap by narrowing the digital divide.

## Our approach: Business Information Centres promote women’s economic empowerment

UNIDO’s projects are designed to cater to the specific needs of women entrepreneurs and to facilitate their access to ICT with a view to:

- Offering new opportunities for women in innovative and non-traditional sectors
- Widening access for women, especially in rural areas, to distance learning and distance work programmes
- Promoting employment of women in the centres
- Organizing ICT training modules specifically targeting women
- Raising awareness of counterpart institutions to gender related challenges of the digital divide



*“As women represent approximately two-thirds of the illiterate population in the world, the question is not if but how we can foster women’s participation in the information society to avoid a negative impact on economic development efforts for building and sustaining communities.”*

UN Global Alliance for ICT and Development



- 89% of all young people in the world live in developing countries
- Nearly 6 out of 10 working youth in sub-Saharan Africa live in extreme poverty
- The number of young people aged 15 to 24 seeking jobs in sub-Saharan Africa continues to outpace the number of new jobs being created in the region



# Promoting ICT for future entrepreneurs

## The challenge: teaching youth to become successful entrepreneurs

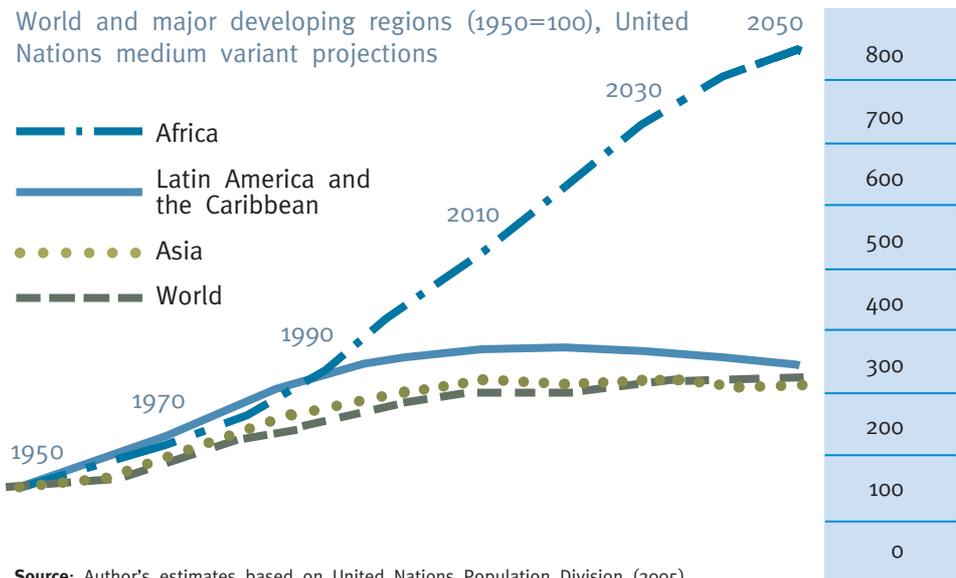
Many young people in developing countries lack access to modern education on business development and the use of ICT. This makes it hard for the growing numbers of youth to successfully compete in the job-market and to contribute one day to their countries' economic development. This is a missed opportunity, as it is often the younger generations which are the most enthusiastic in exploring innovations and which are most comfortable using ICT to further expand their knowledge.

## Our approach: the Entrepreneurship Curriculum Programme

The Entrepreneurship Curriculum Programme (ECP) aims at stimulating entrepreneurial talents among young people by enhancing their ability to identify economic opportunities and by developing other commercial skills such as creativity, innovativeness, planning and leadership which will aid them in their professional life. In order to start familiarizing youth with the entrepreneurial potential of ICT, UNIDO is currently developing, in partnership with Microsoft, tailored ICT training modules within its ECP.

The ECP delivers entrepreneurship curricula to secondary and vocational schools. It was launched in 2001 in Uganda and has been expanded to several other African countries including Mozambique, Timor-Leste, Namibia, Angola and Cameroon.

## Population aged 12-24



Source: Author's estimates based on United Nations Population Division (2005)

In the period between 2006-2009 the courses will have been delivered in a total of 1,397 schools, reaching out to the following number of students:

- Mozambique: 129,700
- Namibia: 140,000
- Timor-Leste: 13,566
- Uganda: 132,800

*“I thought that when I finish my studies I’ll rely on the public sector to employ me. With this course I understood how I could set-up my own business. From now on, I’m going to do everything to become an entrepreneur.”*

Pinto A.P.L., 18 years old, 3rd year, Pemba, Mozambique



“There is a significant market for refurbished PCs, but until now now one has addressed the issues of affordability, training and recycling in a way that makes sense long-term.”

Patrick Bitature  
Chairman of Uganda Green Computer Company Ltd

# The Refurbished Computer Programme

## The challenge: affordable computer access

A key factor that determines the extent to which SMEs are able to take full advantage of ICT is affordability. The reality today is that the price of new computers puts them beyond the reach of most small businesses in developing countries.

## Our approach: linking affordability to sustainability

UNIDO and Microsoft recently expanded their strategic partnership to develop a sustainable business model for refurbishment centres in developing economies to address the needs of SMEs for affordable quality hardware.

### What makes this programme unique?

1. It is built on a sustainable business model that focuses on SMEs as the primary clients. Rather than relying on donations, the programme sells computers to the end users
2. It has stringent quality criteria for refurbished computers, a warranty of 6 – 12 months and provides after-sale services
3. The programme addresses the whole lifetime of the hardware including its environmentally sound disposal

The refurbishment centres complement UNIDO's Business Information Centre (BIC) programme by:

- Creating an affordable supply of hardware for the BICs
- Providing an additional income source for the centres by enabling them to sell computers to SMEs
- Increasing the outreach of affordable quality hardware to rural areas

Microsoft provides access to its Gold Partner Refurbishment Programme which is currently under development, to include:

- Special pricing on software for refurbished PCs
- Criteria on quality of partners including mandating of warranties for PCs
- Marketing support and end-of-life return
- Linkages to potential suppliers of secondary PCs

The model is being piloted in Uganda and best practices will be replicated across the region. The ultimate goal is to provide SMEs with access to affordable quality hardware in Africa, thereby increasing their productivity and competitiveness and contributing to skills transfer.



Population interested in buying second hand PCs in Uganda:

- Yes: 79%
- No: 15%
- Don't know: 6%

UNIDO-Microsoft market study for refurbished computers in Uganda, Makerere University, Uganda

# What is e-waste?

In terms of CO<sub>2</sub>, reusing two PCs with CRT screens is the same as taking one car off the road for one year.

Electrical and electronic waste consists of discarded electronic appliances such as computers, TV sets, hi-fi systems, mobile phones and electric waste such as household appliances, refrigerators, washing machines and other similar equipment. While fully operational appliances do not pose a danger to the user, recycling of discarded equipment can bring severe health and environmental hazards without the right health and safety measures.

EMPA, Switzerland

E-waste is now recognised as a fast growing waste stream and global attitudes are changing:

- Since the late 1980s the Basel Convention<sup>1</sup> has sought to control and minimise the trans-boundary movement of hazardous waste
- The StEP initiative is a partnership of various UN, public and private sector organisations, developing sustainable approaches to e-waste management

**The Basel Convention** on the Control of Transboundary Movements of Hazardous Wastes and their Disposal came into force in 1992. The 170 signatories aim to protect human health and the environment against the adverse effects resulting from the generation, management, transboundary movements and disposal of hazardous and other wastes.

**Solving the E-waste Problem - StEP** is a multi-stakeholder platform of international organizations, industry, NGOs and scientific community aiming to harmonize activities, share experiences and disseminate know-how on the sustainable handling of e-waste. Through five task forces, environmentally safe solutions for the e-waste problem are developed through analysis, planning and pilot projects.



# E-waste: threat and opportunity

## The challenge: E-waste is a ticking time bomb

As developing countries join the global information society the quantity of obsolete ICT equipment grows rapidly. Landfill and the release of toxins into the environment from old computer equipment constitutes a serious environmental concern. At present, electronic appliances are rarely disposed of in an adequate manner and there is little regulation in place, creating hazards for local populations, as well as for the environment.

While the environmental services industry has developed into a multi-billion dollar industry worldwide, it is largely absent in developing countries. This is both a missed business opportunity and a threat since the electronic waste contained in used computers consists of high-value components such as copper and gold, but also highly toxic substances such as lead, mercury and arsenic.

## Our approach: address the full lifecycle of ICT equipment

Once electronic appliances reach the end of their lifetime they need to be properly dismantled and recycled. The objective of UNIDO's programme is to foster the development of an environmentally sound e-waste recycling industry in developing countries.

The e-waste initiative, a close component of the refurbished computer initiative works in close synergy with UNIDO's 43 National Cleaner Production Centres. The UNIDO Cleaner Production programme (CP) aims at building national CP capacities, fostering dialogue between industry and government and enhancing investments for transfer and development of environmentally sound technologies. Through this programme, UNIDO is bridging the gap between competitive industrial production and environmental concerns. CP is more than just a technical solution.



*UNIDO National Cleaner Production Centres*

Only 20% of the total energy consumption of a PC comes from using it. About 80% comes from manufacturing the machine in the first place.



“Software production capabilities are building up within every African nation, and one can see formative software industries in many places.”

Dr. Richard Heeks  
Institute for Development Policy and Management,  
University of Manchester, UK

# Developing a local software economy

## The challenge: relevant software for local needs

The vast majority of software and hardware industries are located in the developed world. Developing countries often suffer from a lack of local expertise and find it hard to participate in global markets for ICT hardware and software. Moreover, local digital or electronic content is often very limited but crucial to unleash local skills and assets.

## Our approach: local software innovation

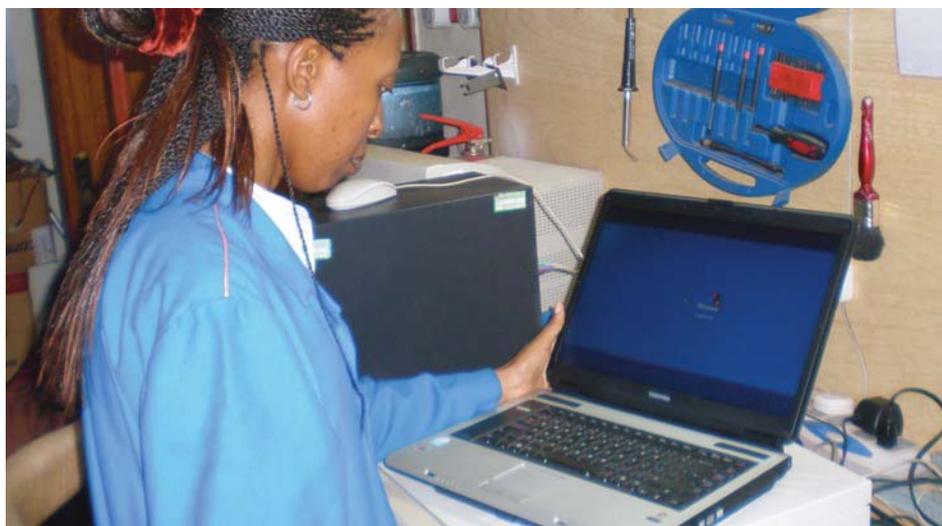
UNIDO promotes the development of local software business and cooperates with the public and private sectors to set-up local software development centres demonstrating and developing software solutions that are sector specific and target local business needs.

In September 2007, UNIDO, the Government of Uganda and Microsoft launched an initiative to promote the development of the local software industry in Uganda and to enhance the role that local software developers and ICT graduates can play in the economies of developing countries.

The first centre established in Uganda will act as an incubator for innovations and solutions in ICT. It will offer technology training through:

- Developer workshops
- A support centre
- A proof of concept lab

The centre will also encourage industry skills transfers through best practice seminars conducted by local and international industry players.



*“The opportunity for innovation and creativity is inherent in problem solving. If, therefore, you take over my problem, you cause me two problems: you deprive me of the opportunity to be innovative, and you leave me with the residual guilt of incompetence.”*

Joseph O. Okpaku, Sr. Ph.D., President and CEO, Telecom Africa Corporation



“We must link the energy issue with the economic modernisation of poor economies as well. We must link it with the issue of wealth creation. We cannot close the poverty divide or the digital divide without a reliable source of cheap energy in developing countries.”

Dr. Kandeh K. Yumkella  
Director-General of UNIDO

# Utilizing renewable energy

## The challenge: exploiting ICT in rural off-grid areas

Reliable power supply is an overriding precondition in the operation and outreach of ICT throughout any country. Lack of reliable energy services coupled with poor communication in remote rural areas in many developing countries hamper both social and economic development.



*The world at night*

Source: C.Mayhew & R.Simmons (NASA/GSFC), NOAA/NGDC, DMSP Digital Archives

## Our approach: Renewable Energy powered Business Information Centres

UNIDO has accumulated significant expertise in implementing a diverse portfolio of renewable and rural energy projects. We apply this knowledge to extend ICT access to rural areas through renewable energy powered Business Information Centres.

The first solar-powered UNIDO Business Information Centre is planned for the district of Mocuba, Mozambique. In addition to providing tailored access to ICT, the self-sustainable centre also demonstrates the use of renewable energy for productive activities particularly to empower rural small-scale entrepreneurs.

Similar renewable energy powered Centres will soon be replicated in Nigeria, Uganda and Kenya.



*“Africa is renewable in resources which can benefit the majority of people within a few years.”*

Achim Steiner,  
Executive Director,  
United Nations  
Environment Programme  
(UNEP)



“We find that mobile telephony has a positive and significant impact on economic growth, and this impact may be twice as large in developing countries compared to developed countries.”

Leonard Waverman  
Professor & Chair of Economics, London Business School



# Mobile phone solutions for SMEs

## The challenge: customizing mobile phone services for SMEs

The recent development of mobile telecommunications in the developing world is impressive: in Africa alone mobile penetration doubled from 6.5 per 100 inhabitants in 2003 to 27 per 100 inhabitants in 2007 (ITU, 2008).

Mobile phones have an especially major impact in developing countries—substituting for scarce fixed connections, reducing transaction costs, increasing mobility, broadening trade networks, and facilitating searches for employment.

Yet, the potential to spur economic growth, especially entrepreneurial business, in developing countries remains largely untapped.

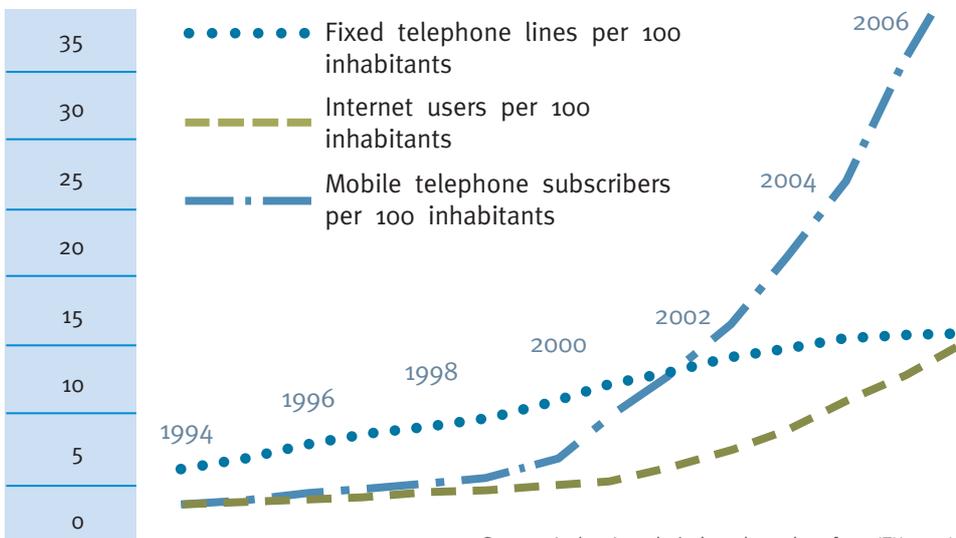
## Our approach: Business Information Centres going mobile

Mobile technology presents an opportunity for SMEs to cut out the middleman, increase their access to the market and stay in communication with their clients.

UNIDO is utilising mobile telephony to take the services of the Business Information Centres out into the surrounding community, enabling:

- Women entrepreneurs to build a business as ‘village phone operators’
- Farmers to make good choices based on market conditions
- Rural poor to receive banking services they otherwise couldn’t access
- Stimulation of locally designed mobile based solutions

## ICT Penetration in Developing Countries



Before phones, fishermen in Kerala, India, would find oversupplied local markets when they had brought in a good catch of sardines. Once mobile phones were introduced, they could shop amongst markets to bring their supply to meet the demand. This reduced waste and smoothed prices. Fishermen’s profits increased by 8%, and consumer prices have dropped by 4%.

Economist, May 2007

# Viet Nam The Government Business Portal

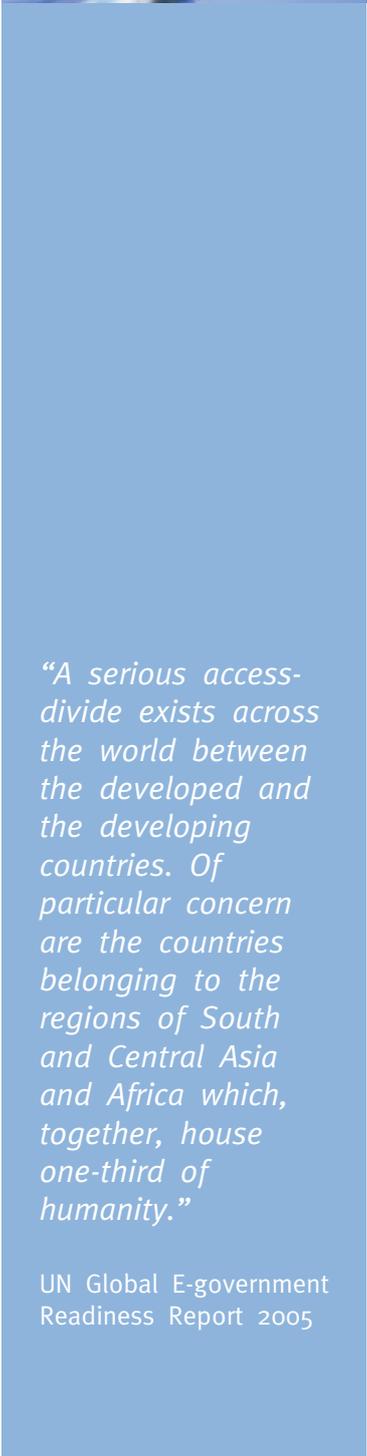
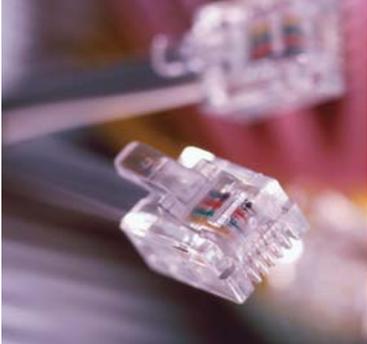
(www.business.gov.vn)

Small and medium enterprises (SMEs) account for over 90% of manufacturing employment in Viet Nam and contribute an impressive 45% of the domestic creation of economic wealth. To address the lack of institutional support in the field of SME promotion, UNIDO assisted the Vietnamese Government in the development of an SME policy framework, institutional capacity building and business development services to improve the governmental support framework for SMEs.

In close cooperation with the Agency for SME development and 19 collaborating ministries, agencies and departments, UNIDO contributed to the establishment of Viet Nam's Government Business Portal. This portal contains today:

- More than 300 user-friendly business licence fact sheets
- Over 7,000 pages of downloadable legal texts
- Business advisory services for small businesses and comprehensive information on SME support institutions, policies and programmes

The screenshot displays the ASMED Business Portal interface. At the top, the logo 'ASMED BUSINESS PORTAL' is visible alongside the Ministry of Planning and Investment and the Agency for SME Development. The main navigation bar includes sections like 'ADVICE FOR BUSINESS', 'SME SUPPORT INSTITUTIONS', 'BUSINESS REGULATIONS', and 'NEWS AND EVENTS'. A sidebar on the left lists various business stages: 'Starting up', 'Before you start', 'Choose a legal form and register your business', 'Manage tax obligations', 'Recruit employees', 'Market your products and business', 'Financing your business', 'Manage your Work Place', 'Employing People', 'Managing Quality', and 'Your Business Regulations'. The main content area features a 'Starting up' section with a list of tasks for those planning to start a business, such as 'What you need to think', 'What your options are', 'Your options for raising', 'What your tax obligations', and 'What you need to do next'. Below this, there are several news articles and service categories, including 'THỊ TRƯỜNG VÀ SỰ PHÁT TRIỂN', 'KẾ HOẠCH PHÁT TRIỂN', 'HỖ TRỢ QUỐC TẾ', 'APEC VIETNAM 2008', 'TÌM KIẾM', and 'LIÊN HỆ'. The bottom of the page contains contact information and a footer with the year 2005.



# Creating e-government services for SMEs

## The challenge: making the market a more transparent place

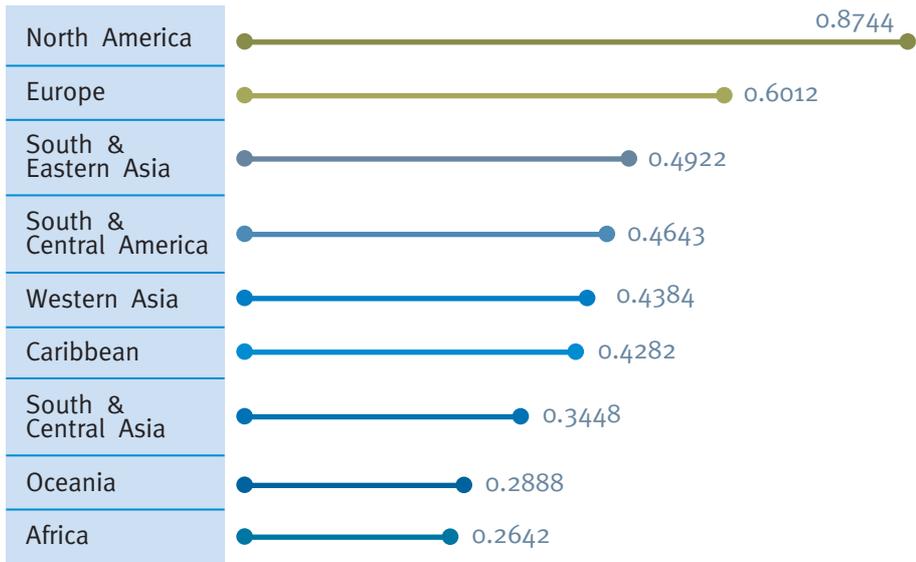
Tools and services established to help SMEs are of little use if the target enterprises do not know how to access them. Entrepreneurs often face bureaucratic complexity and difficulty accessing important business information, which would help them to interact with the market more effectively.

## Our approach: single entry point business portals

UNIDO is building bridges between Governments and businesses by developing portals that offer integrated access to information on regulatory mandates, support institutions and generic business advice, especially useful for business start ups.

On-line provision of government information and services can increase the efficiency and coverage of public service delivery to small firms, it can act as a model and set standards for ICT adoption by small firms. UNIDO, with its longstanding experience in SME development, is assisting governments and SME support institutions to take-up these opportunities and to address them in an integrated manner.

## Regional e-government readiness in ranking



Source: UN Global E-government Readiness Report 2005

*“A serious access-divide exists across the world between the developed and the developing countries. Of particular concern are the countries belonging to the regions of South and Central Asia and Africa which, together, house one-third of humanity.”*

UN Global E-government Readiness Report 2005



“Foreign Direct Investment is currently making a significant contribution to the financial and knowledge based resources of many sub-Saharan Africa countries. I believe UNIDO has provided the most comprehensive and well-researched empirical study and economic impact of FDI in the region ever undertaken.”

Professor Emeritus John Dunning  
Reading University

# The AfrIPAnet Investment Monitoring Platform

## The challenge: increasing Foreign Direct Investment and its impact in Africa

Most of the economies in sub-Saharan Africa are striving to attract higher levels of Foreign Direct Investment (FDI). They see the potential of FDI to supplement domestic savings, bring in skills, know-how, technology and to facilitate market access. Nevertheless, FDI in Africa is still limited and the sparse FDI inflows are mostly directed towards natural-resource exploitation in only a few resource-rich African economies. Other countries are marginalized and the economic growth effects of FDI inflows are not always clear.

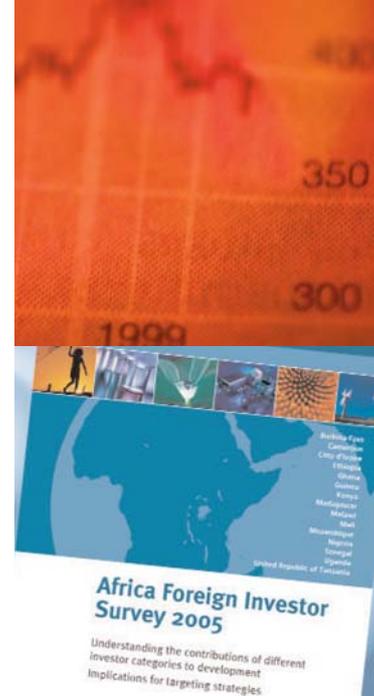
## Our approach: the Africa Investment Promotion Agency Network ([www.unido.org/afripanet](http://www.unido.org/afripanet))

In 2001 UNIDO established an Africa Investment Promotion Agency Network (AfrIPAnet). AfrIPAnet works to assist policy-makers tailor their strategies to attract Foreign Direct Investment (FDI), and private decision-makers to make sound investment choices. The network currently has 15 member countries and will be extended to 31 countries in the continent during the current biennium.

The objectives of AfrIPAnet are to:

- Establish a continent wide Investment Monitoring Platform based on enterprise surveys
- Compile ratings, rankings and benchmarks at the country, sector and enterprise levels
- Based on the Monitoring Platform, develop policy measures, regulatory interventions and targeted services aimed at improving the investment climate
- Measure the effects of these policy interventions on investor actions, performance and impact
- Increase foreign investment flows and capture their potential to connect and stimulate the local private sector
- Benchmark the practices and performance of domestic companies with reference to the purchasing and subcontracting requirements of large corporations

On 12 March 2007, at the UNIDO Expert Group Meeting on Investment in Africa, UNIDO and Microsoft launched the prototype of a web-based technology solution, a key component of the Monitoring Platform, which is designed to enhance communication between Governments in Africa and investors.



- Monitoring Investment Flows
- Calibrating Investment Governance
- Enhancing Investment Impact on Local Economies



“The build-up of stable, long-term and trust-based relationships contributes to nurturing local entrepreneurship and employment and can be among the most powerful social contributions large enterprises can make.”

Wilfried Luetkenhorst  
Chief of Cabinet and Director Bureau for  
Organizational Strategy and Learning, UNIDO

# 3: Working in partnership

The globalization of industrial value chains and the rapid advances in ICT have provided new parameters for cooperation. Within this context, UNIDO is continuously developing its partnerships with global private sector players. Launched in 1999, the UNIDO Business Partnership Programme develops economically viable and sustainable partnerships for technical cooperation to improve the quality, efficiency and competitiveness of SMEs in developing countries.

UNIDO is one of the core agencies of the UN Global Compact. As potential partners, UNIDO targets multinational companies that share the organization's inclusive approach to development: a willingness to integrate economic, social and environmental dimensions into their business strategies and to cooperate with other players in the development process.

By tapping into complementary resources and balancing different interests, business partnerships can create a win-win situation for all who have a stake in industrial development.

UNIDO has developed business partnership programmes with a wide range of business partners including BASF, Ericsson, Fiat, Microsoft and Hewlett-Packard to enhance the competitiveness of SMEs in developing and transition economies.



## The Global Compact

Launched in 2000, the UN Global Compact brings business together with UN agencies, labor, civil society and governments to advance ten universal principles in the areas of human rights, labor, environment and anti-corruption. Through the power of collective action, the Global Compact seeks to mainstream these ten principles in business activities around the world and to catalyze actions in support of broader UN goals. With over 3,000 participating companies from more than 100 countries, it is the world's largest voluntary corporate citizenship initiative. UNIDO, as one of the six core UN agencies, pays special attention to the needs of SMEs engaged in the Global Compact.



Over 3,000 companies from more than 50 countries are now engaged in the Global Compact. Of these, almost 50% are classified as small and medium-sized enterprises.



“Information and Communication Technology is a key development tool – it contributes to increased productivity and helps stimulating a competitive knowledge-based economy. More public-private partnerships are needed – such as the one we have established with Microsoft – to bring Africa closer to achieving the Millennium Development Goals.”

Dr Kandeh K.Yumkella  
Director-General of UNIDO

# The UNIDO - Microsoft partnership



In July 2006, on the occasion of the first Microsoft Government Leaders Forum Africa in Cape Town, South Africa, UNIDO and Microsoft signed a strategic partnership, pooling expertise to support SMEs and foster greater innovation and competitiveness. This highly dynamic partnership recognises the importance of harnessing the use of ICT to promote sustainable industrialisation as a means of improving livelihoods in developing countries, particularly in sub-Saharan Africa.

The main focus of the partnership is to:

- Promote the development and growth of SMEs through the use of ICT
- Foster the development of local software solutions
- Promote innovative e-business and e-government initiatives
- Assist governments with the development of national ICT strategies

Areas of ongoing cooperation include:

- Facilitating access of SMEs to affordable quality hardware, relevant software and tailored ICT training
- Addressing the need for environmentally sound e-waste strategies
- Promoting local software industries
- Supporting AfrIPAnet to increase its investment promotion services and outreach through the development of tailor-made portal solutions
- Customizing ICT training curricula to the needs of secondary schools and vocational training centres in developing countries



“We look forward to working with UNIDO in Africa, applying our combined knowledge and expertise to support entrepreneurship and foster the growth of businesses that will drive economic development.”

Dr. Cheick Modibo Diarra, Microsoft Chairman for Africa



“Young people can play a greater role in micro-enterprise development, which is one of the best ways to create jobs. Training offers a taste of professional life, making the transition from education to business much easier.”

Gabriele Zedlmayer  
Vice President of Corporate Marketing and Global Citizenship,  
HP Europe, Middle East and Africa



# The UNIDO - Hewlett-Packard partnership



In May 2008 UNIDO signed a strategic partnership with Hewlett-Packard (HP). The partnership addresses the needs of graduates (aged 16-25) through the HP GET-IT (Graduate Entrepreneurship Training through IT) programme. In the framework of the UNIDO - HP partnership the GET-IT programme is currently being deployed in six African countries including Egypt, Morocco, Nigeria, South Africa, Tunisia and Uganda. Eight training centers in these countries will teach combined entrepreneurship and IT skills training to under- or unemployed youth.

HP GET-IT is a social investment flagship programme, offered in more than 25 countries and comprises a network of more than 70 centers. GET-IT enables young people to understand ICT technology solutions that address business challenges in the areas of management and operations, finance, marketing, communication and technology management. Trainees will acquire the basics of entrepreneurship with practical, hands-on experience in the use of technology to enter professional life or to start their own business.

Selected non-profit organizations (NPOs) in the six above-mentioned countries will receive a grant package comprising HP technology, a professional guidance course on the Technology Tools (T-tools) curriculum for their trainers and the T-tools training materials for the students. Additionally, HP offers ongoing networking opportunities for trainers and fun online tools such as entrepreneurship games for students

The UNIDO-HP partnership promotes sustainable economic development in Africa by harnessing the use of ICT through skills development and capacity building of job-seeking youth. As such, the partnership between UNIDO and HP actively contributes to raising socio-economic living standards and to reducing poverty levels in participating African countries.

After the initial roll out of the GET-IT programme in six African countries UNIDO and HP plan to expand the programme further in Africa as well as in the Middle East.



“Through ICT we have to fast track the development of our youth whom we refer to as e-cadres, who will revolutionarise their lives and those of their communities through ICT.”

Ms. Phumzile Mlambo-  
Ngcuka, Deputy  
President of South  
Africa



“Increasingly sophisticated ICT applications allow firms to store, share, and use their acquired knowledge. All this can reduce inefficiencies in the use of capital and labour and can lower operational and transaction costs among economic agents, thus improving the productivity and profitability of firms.”

World Bank

# 4: ICT Tools, transforming knowledge into ICT solutions



## What is COMFAR?

COMFAR, the Computer Model for Feasibility Analysis and Reporting, is a software application developed by UNIDO for the analysis and appraisal of investment projects. The main module of the programme accepts financial and economic data, produces financial and economic statements and graphical displays and calculates measures of performance.

The programme can be used for the analysis of investments of new projects and the expansion or rehabilitation of existing enterprises. The software is based on the feedback of more than 5,000 users in 140 countries.

The software is available in 18 languages, including Arabic, Chinese, Croatian, Czech, English, Farsi, French, German, Indonesian Bahasa, Italian, Japanese, Korean, Polish, Portuguese, Russian, Serbian, Slovak and Spanish.

## COMFAR Training Workshops

Twice a year, UNIDO offers one-week training workshops on COMFAR III at basic and advanced level. Upon request, UNIDO also organizes courses at the premises of the customer. ([www.unido.org/comfar](http://www.unido.org/comfar))

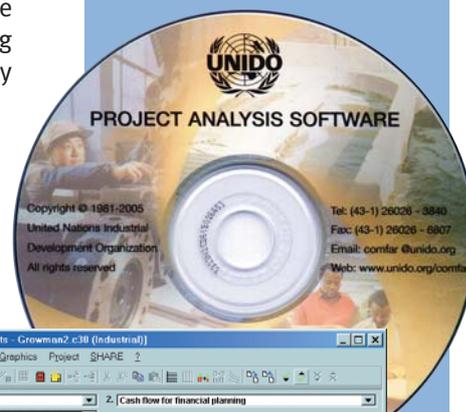
## What is Company Project Profile?

The Company Project Profile (CPP), has been devised to facilitate the standardised formulation of investment projects in preparation of their screening and subsequent promotion through UNIDO's Investment and Technology Promotion Offices (ITPOs).

The CPP supports the formulation of investment projects through:

- Definition of the project type
- Description of the entrepreneur proposing the investment project
- Explanation of the proposed project including a link to COMFAR
- Description of country-related factor costs (e.g. energy, transport etc.)
- Evaluation of the entrepreneur and proposed investment project.

CPP is currently available in English, French and Italian. Other languages will follow, based on demand.





“Information technology and business are becoming inextricably interwoven. I don’t think anybody can talk meaningfully about one without the talking about the other.”

Bill Gates  
Chairman of the Board of Directors of Microsoft

# Enhancing business performance

## What is PHAROS?

The UNIDO PHAROS software suite is a set of IT-based educational tools for entrepreneurs from SMEs to assist in strategic and business planning and monitoring of their performance. The software suit offers the ability to:

- Minimise data collection for enterprise applications
- Increase usability and functionality
- Prompt flagging of potential problems
- Rapid in-depth problem analysis
- Facilitate the use of external data sources
- Rapidly provide benchmarks and performance reports
- Simplify decision making through simulation of decision options
- Enhance business performance

To date the PHAROS software offers the following tools:

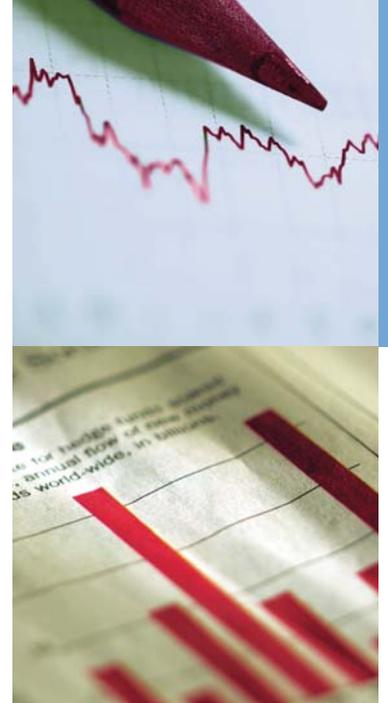
**PHAROS Business Navigator** - a comprehensive yet simple and easy to use introductory software package for measuring, monitoring and benchmarking strategic business performance of enterprises.

**Financial Improvement Toolkit, (FIT)** - a simple tool assist in the analysis and improvement of annual financial assets.

**Measurement Control Chart Toolkit, (MCCT)** - a tool to assist in routine activities related to handling measurement systems.

PHAROS is also linked and supports the use of other production performance management software such as the Produce Plus module - which allows enterprise management monitoring, controlling and evaluating company production performance in detail.

For more information visit [www.unido.org/pharos](http://www.unido.org/pharos)



“Given the fundamental role that SMEs play in economic growth, it is important that particular attention is paid to the critical factors underlying their birth, development, restructuring, transmission and demise.”

Mr. Ibrahima Diouf,  
Director of SMEs of  
the Republic of Senegal

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