Internet in Africa and the role of ICTP

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Well known facts

- ✓ Internet as a cost-effective channel for the dissemination of knowledge and services is a paramount in our days.

- ✓ Internet access contributes to social and economic development and is recognized as a policy objective in most countries.

- ✓ A key technology for that is wireless networking.

Internet in the world

Internet population **2007** vs **2012**, a 2x increase in 5 years

North America 233M → **273M**

Europe 322M → **501M**

Asia 418M → **1B**

The Middle East 20M → **77M**

Latin America 110M → **236M**

Africa 34M → **140M**

Oceania 19M → **24M**

World 1.15B → **2.27B**

Data source: Internet World Stats

www.pingdom.com

Internet in the World (cont.)

- **Africa** has gone from **34 million to 140 million**, a 317% increase.

- **Asia** has gone from **418 million to over 1 billion**, a 143% increase.

- **Europe** has gone from **322 million to 501 million**, a 56% increase.

- **The Middle East** has gone from **20 to 77 million**, a 294% increase.

- **North America** has gone from **233 to 273 million**, a 17% increase.

- **Latin America** (South & Central America) has gone from **110 to 236 million**, a 114% increase.

- **Oceania** (including Australia) has gone from **19 to 24 million**, a 27% increase.

Africa and the Internet

AFRICA

Africa is the second-largest continent, after Asia, in size and population; located south of Europe and bordered to the west by the Atlantic Ocean and to the east by the Indian Ocean.
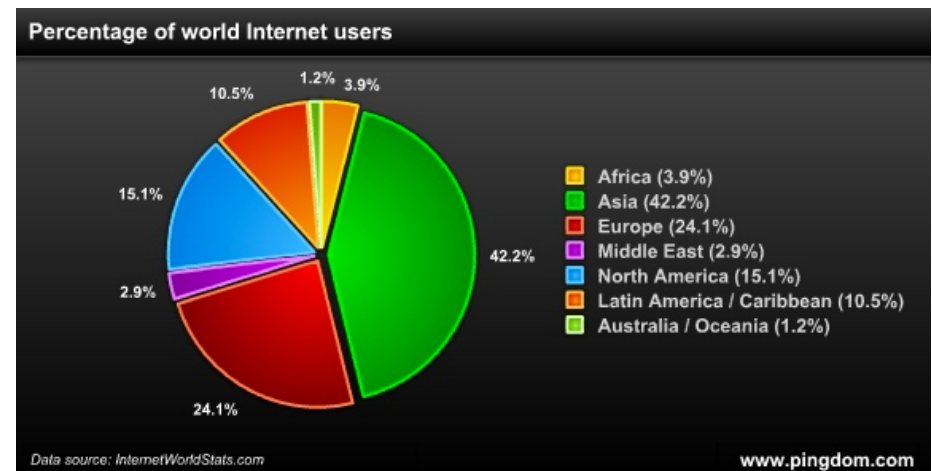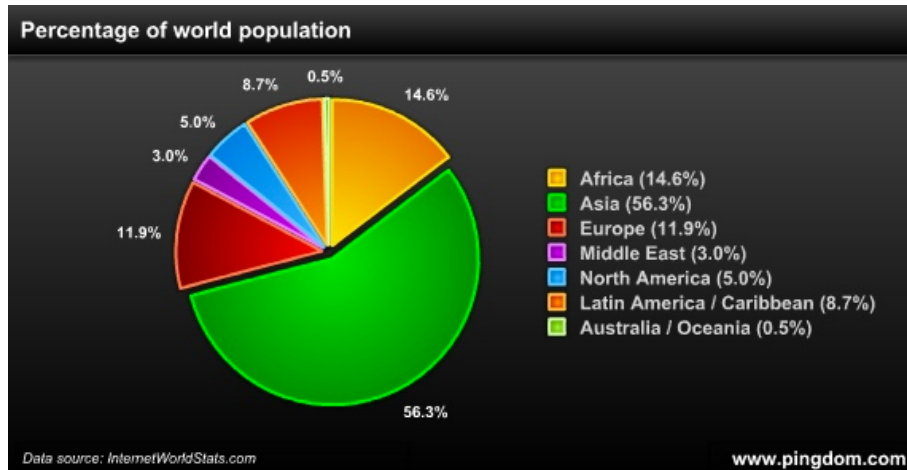
Links to the African Continent - 58 countries and regions

1,073,380,925 population estimate for Africa in 2012.
167,385,751 Internet users in Africa on Dec 31, 2012, a 15.6% penetration rate.
51,612,460 Facebook subscribers on Dec 31/12, a 4.8% penetration rate.

World Population and Internet

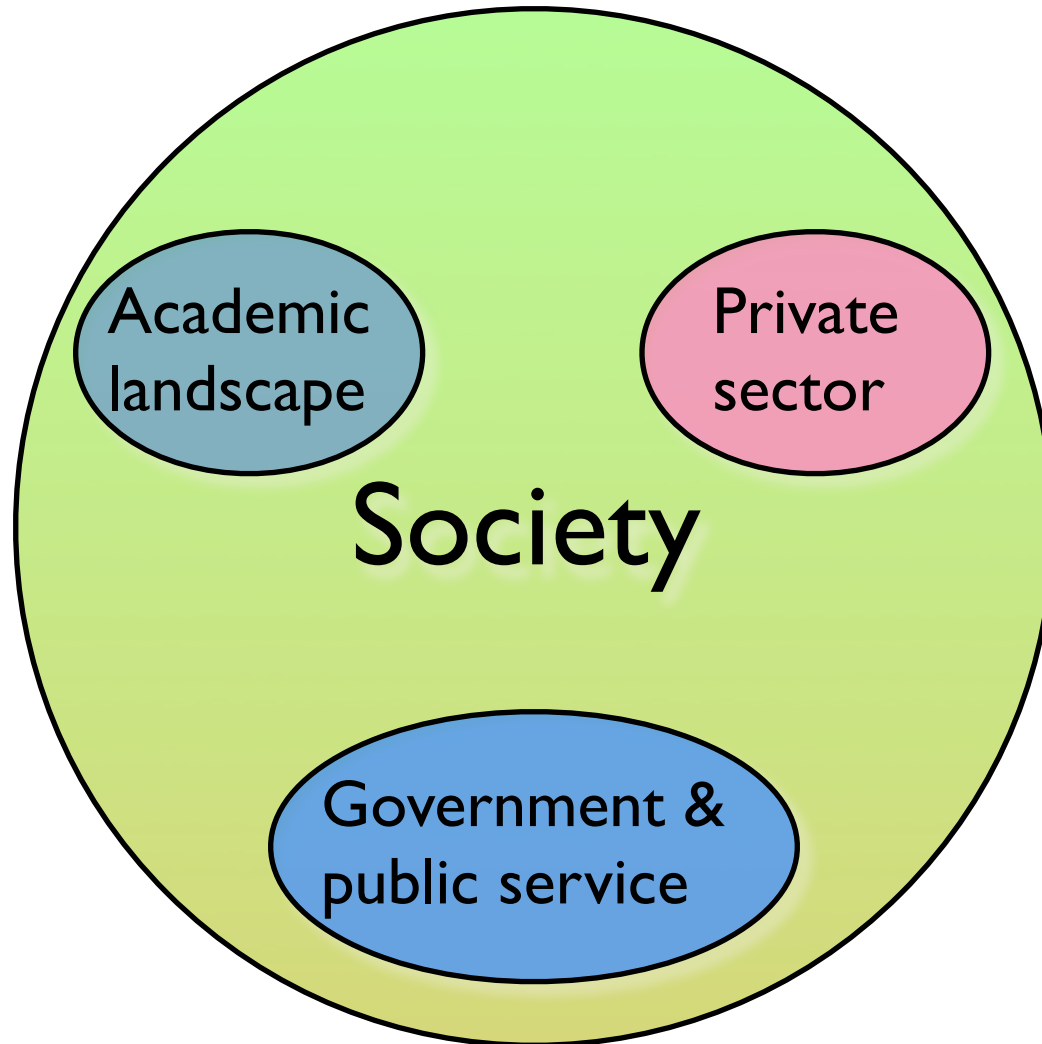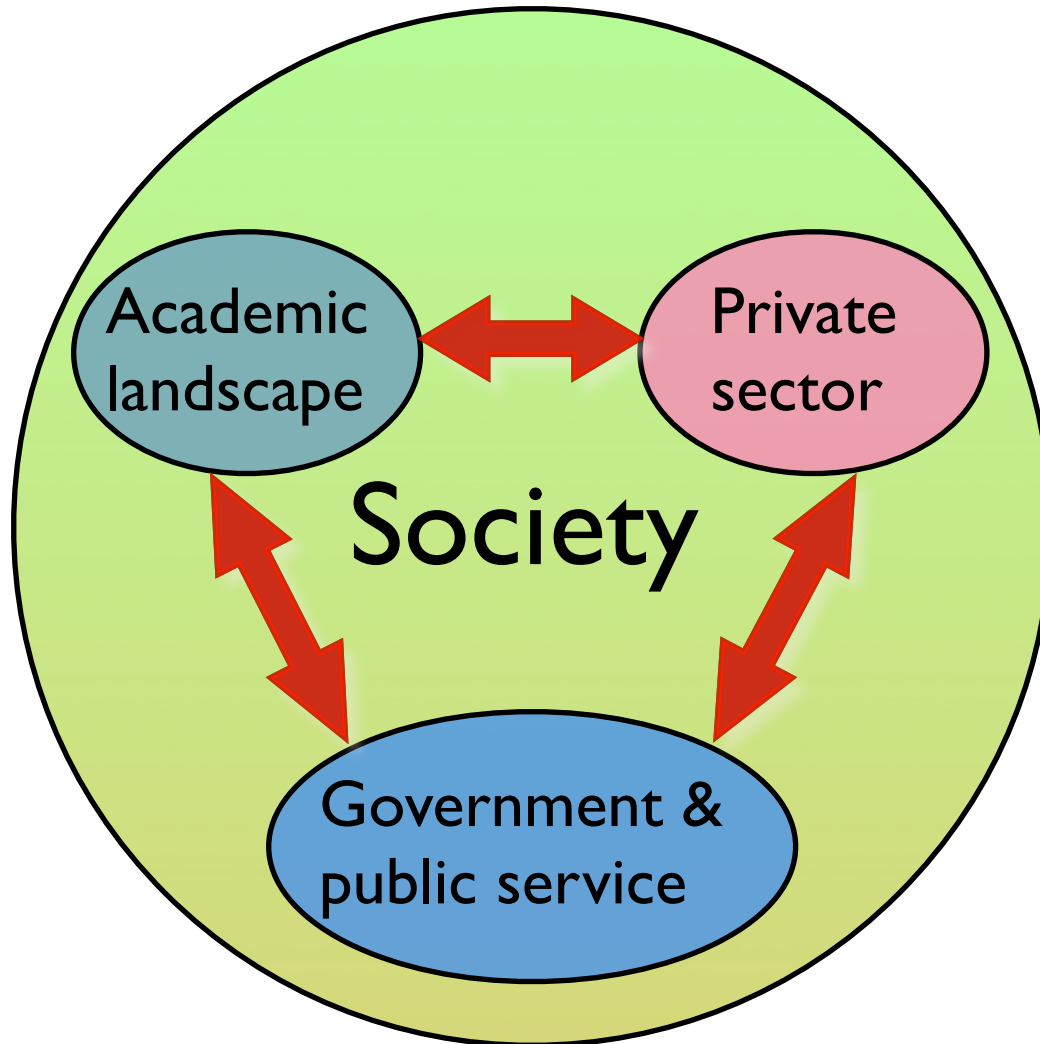# What these data indicate

✓ The growth of Internet access and in general ICT poses the challenge of helping developing countries and Africa in particular to avoid of being cut out from the information flow.

✓ To help solve the problem we need to understand the situation.
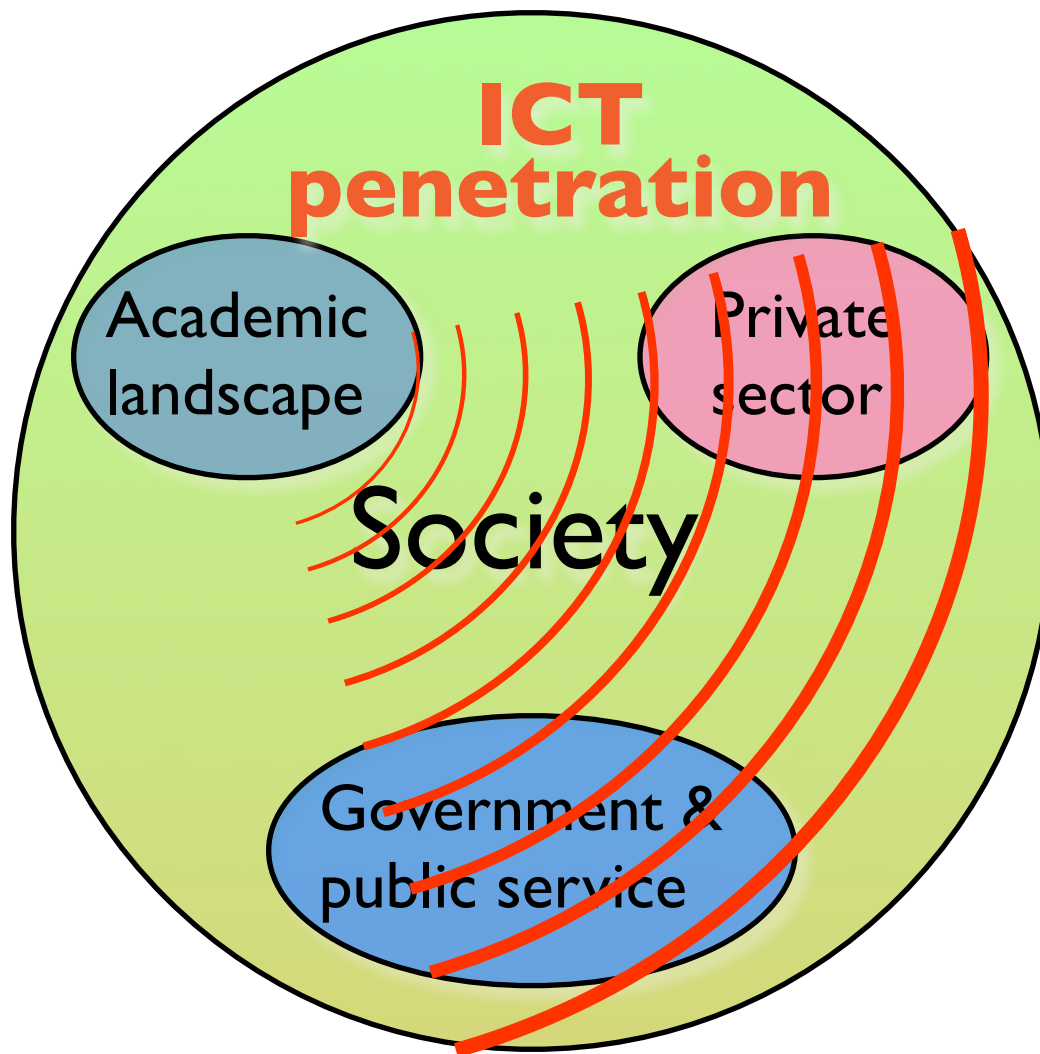
Typical situation in a developing

Society

- Academic landscape
- Private sector
- Government & public service

The ideal status

A way towards it

The academic landscape is the obvious starting point: from there ICT will permeate to the rest of society.

Internet access at African

African universities are crucial to the future development of the Internet on the continent in two ways.

- ✓ *They contain one of the largest groups of existing and potential users: today's student user is tomorrow's future decision-maker.*

- ✓ *Universities should be generators of content that will be used by the same students to increase their knowledge and skills.*

But

- ✓ The generally poor internet connectivity of Africa's universities place the continent at a distinct disadvantage in terms of electronic ranking measurement.

- ✓ Those countries with the greatest connectivity, notably South Africa and Egypt, have the most universities in the Top 100, and with 16 institutions in the Top 100 Morocco also achieves a strong presence.

Our views at ICTP

We start from the mission of our Centre:

"*To foster top quality scientific research and knowledge in all corners of the world to achieve cultural richness, sustained development and the survival of humankind.*"

Looking at the development of ICT and Internet access we built up a vision to help these technologies to reach all countries and particularly Africa.

In this vision training plays a key role.

From theoretical training to the Marconi Lab and hands-on training

The birth of the Marconi Lab (*a training lab and a technology observatory*)

⇧

The need to link the choice of cost-effective tech with training

⇧

The question: What technology?

⇧

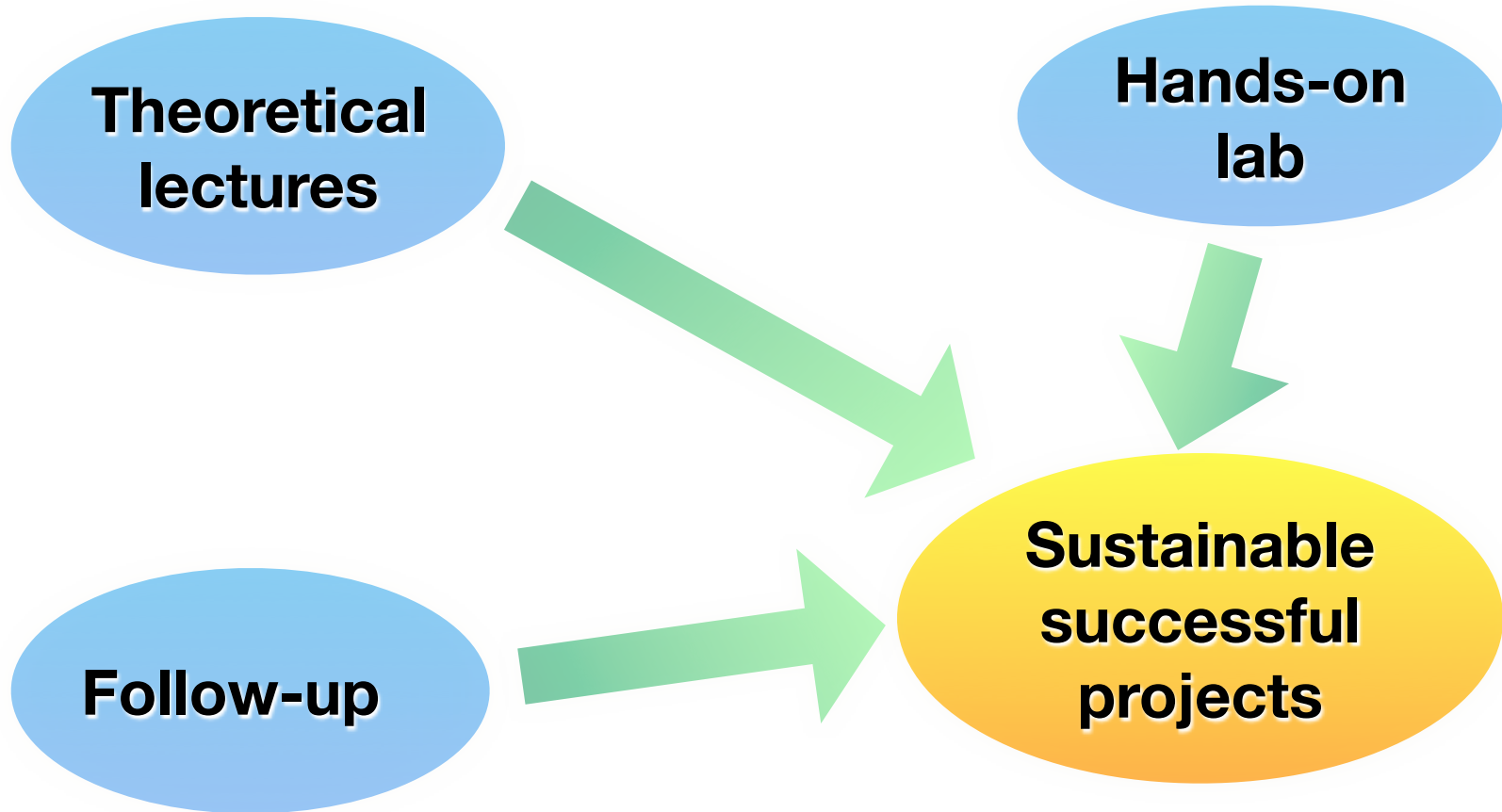**Courses on wireless technology for networking with emphasis on hands-on training**

⇧

Theoretical courses on application-oriented topics

⇧

Theoretical courses on radiopropagation

Method: "train the trainers"

Training at ICTP in radiocommunications and ICT

2000 young scientists and technical staff trained since 1989.

- 40+ courses held at ICTP, Trieste and in Africa (about 2.5 weeks with about 40 participants each)

ICTP and ITU

ICTP signed in February 2004 a Cooperation Agreement with the ITU/BDT, that was renewed in 2012, to collaborate for the advancement of capacity building and development capabilities in the field of telecom science and technology in developing countries with particular emphasis on ICT.

ICTP-ITU STRENGTHENING TRAINING CAPACITY IN WIRELESS NETWORKING IN

ICTP-ITU TRAINING IN WIRELESS NETWOKING IN AFRICA

Project financed by ITU/BDT

Aim of the project: to train a group of African trainers from ITU Excellence Centres in Rwanda and Senegal.

Eight weeks at ICTP and two activities in Africa between 2011 and 2012.

ICTP team: E. Pietrosemoli, C. Fonda and M. Zennaro

THANK YOU FOR YOUR ATTENTION