



**Joint ITU/ECA Regional Workshop on  
Information and Communication Technologies (ICT) Indicators  
Gaborone, Botswana  
26-29 October 2004**

**Host: Botswana Telecommunications Authority (BTA)**

**ITU Data collection, dissemination, analysis  
and other activities**

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Telecommunication Development Bureau**



## Topics – ITU statistics

- Why? - (Reasons for ITU data collection)
- How? – (How do ITU collect statistics)
- What? - (Indicators ITU collects)
- Dissemination - demand for ITU data
- Analysis
- Usefulness of the data (who get's what?)
- Other ITU statistical activities
- Conclusion



# ITU Statistical Obligation

- As a United Nations agency, the ITU has an obligation to produce statistics covering its sector. This is in line with other specialized agencies that publish statistics covering their respective field of operations. This forms part of the global statistical system of the UN.
- Inside ITU, Resolution No. 8 (Istanbul, 2002) calls on the Director of the BDT *"...to survey countries and produce world and regional reports, in particular on...world telecommunication development."*



ITU through its "Indicators" is the main source of internationally comparable data on telecom



# Data collection – How and what

## HOW?

- Two Telecommunication Indicator Questionnaires per year addressed to government agencies responsible for telecom/ICT *or* operators
- Online research
- Annual reports

## WHAT?

- Telephone network
- Mobile services
- Traffic
- Staff
- Quality of Service
- Tariffs
- Revenues & Investment
- Broadcasting
- Information Technology

Data are entered into the World Telecommunication Indicators Database



## Storage - ITU data



- Data stored include:
  - annual numerical data (indicators)
  - industry/country operators' information (contact details, operators functions, short description, etc.)
- Updated regularly to cope with the fast changing telecom/ICT environment
  - New indicators added
  - “Old” indicators kept in the database for future use

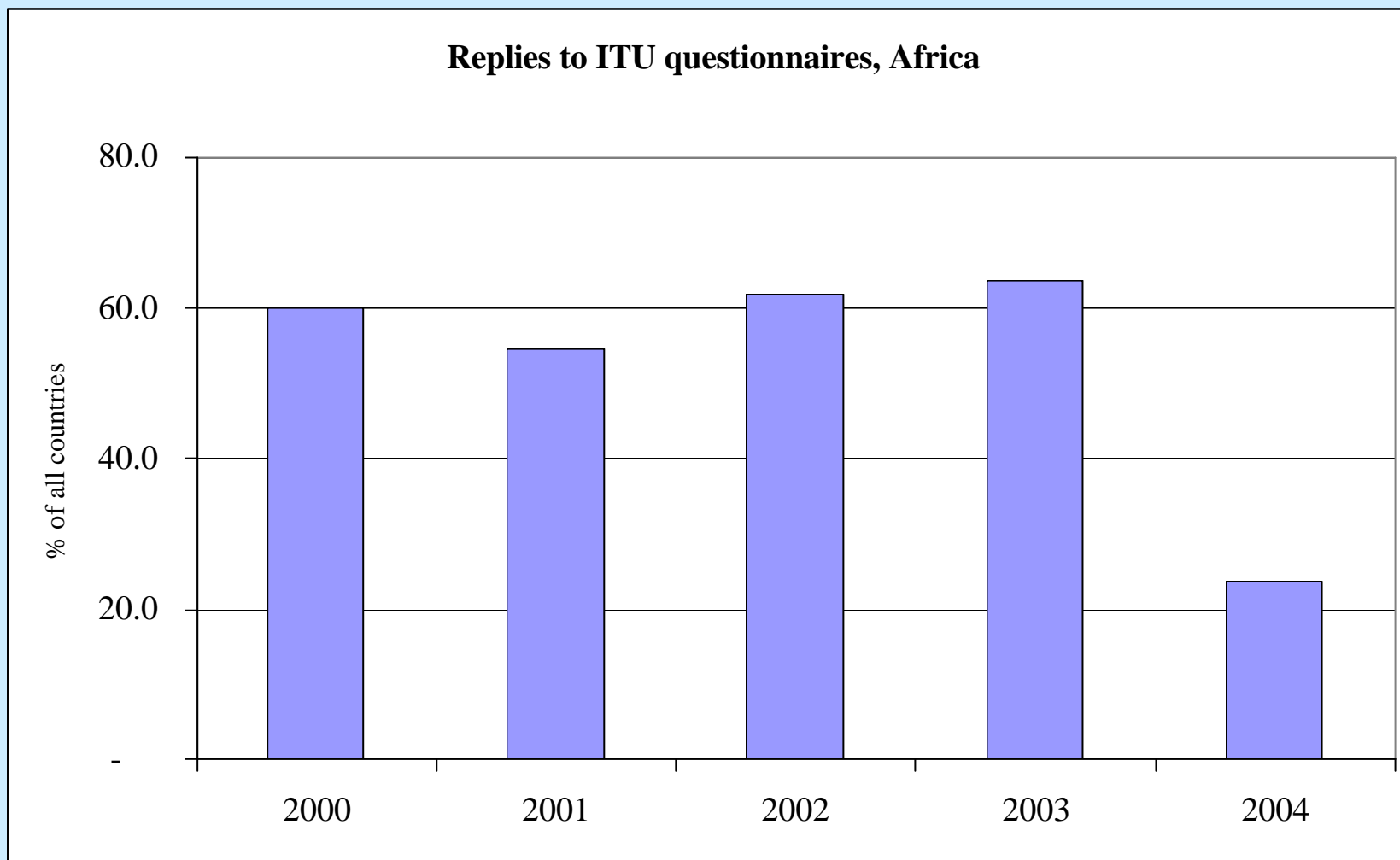


# Data Collection - Challenges

- Not every country returns/answers questionnaire
- Incomplete data: Not all questions get answered
- More work to aggregate operators' data since the fall of monopoly
- Operators data or annual reports sometimes not available
- Newer telecom/ICT data hard to obtain from developing countries
- Not all national statistical agencies collect ICT statistics



# Data Collection - Questionnaires

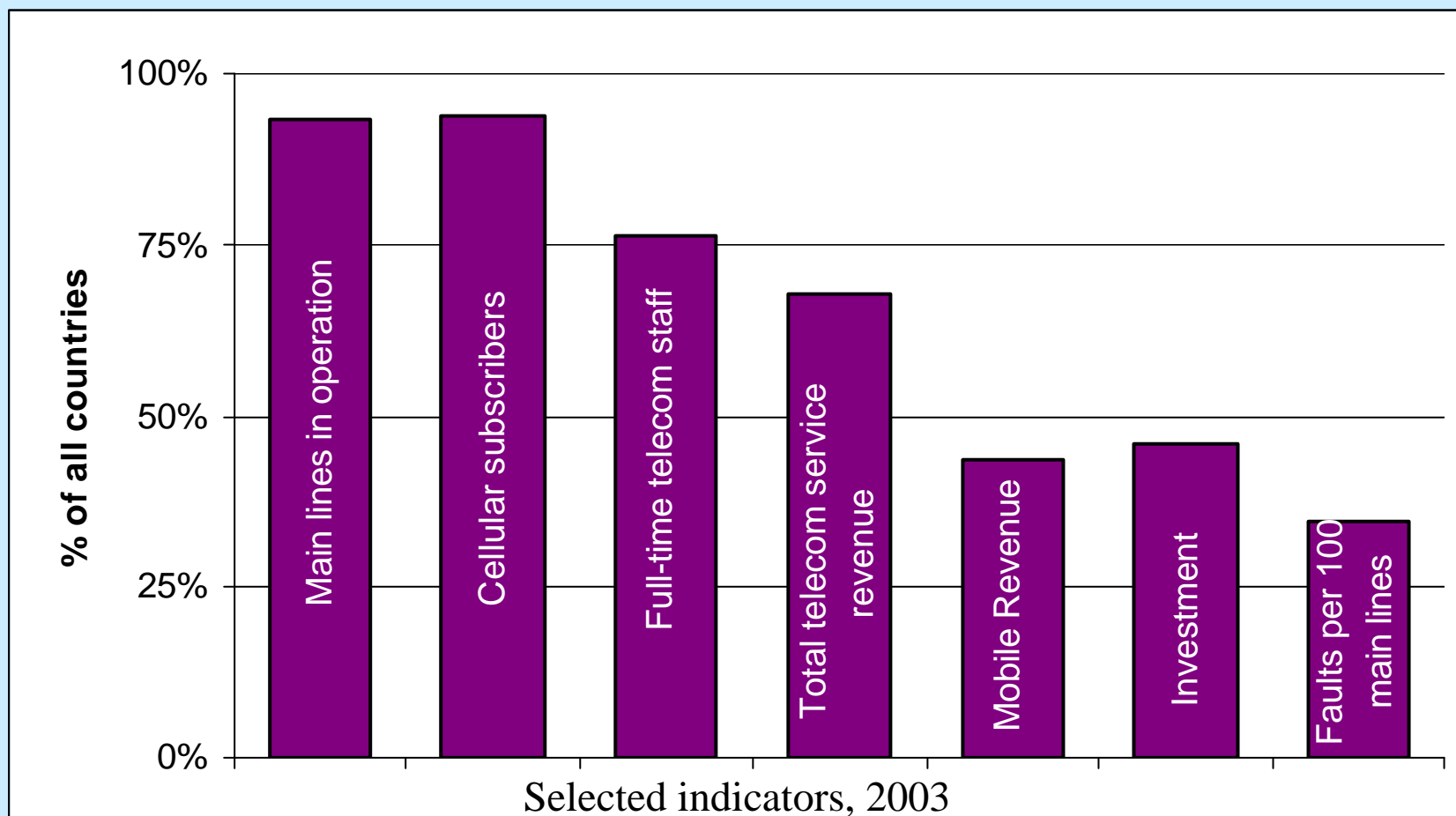


Source: ITU World Telecommunication Indicators database



# Data Collection - Challenges

Incomplete data: Not All questions get answered







# Data Retrieval - ITU purposes

**Extract TS data**

1 Series specifications      2 Query specification      3 Close      4 Cancel

Click-select any fields below to start a list.

3	4	5
Select	Select	Select
2002	ZAA _Africa	i11 Telephone stations (sets)
2001	ZLA _Americas	i110 Number of local public switching exchanges
2000	ZAP _Asia	i111 Percentage of households with a telephone
1999	ZEU _Europe	i111c Residential main lines per 100 households
1998	ZNA _Pacific	i111m Percentage of households with a mobile phone
1997	ZWO _World	i112 Public payphones
1996	AFG Afghanistan	i112a Coin-operated payphones
1995	ALB Albania	i112b Card-operated payphones
1994	DZA Algeria	i112c Public call offices
1993	ASM American Samoa	i112 Main telephone lines in operation
1992	AND Andorra	i1121 Main lines in largest city
1991	AGO Angola	i1123 Main lines growth
1990	AIA Anguilla	i112a Analog main lines
1989	ATG Antigua & Barbuda	i112t Total telephone subscribers
1988	ARG Argentina	i113 Main lines connected to PBX
1987	ARM Armenia	i1131 Number of private branch exchanges (PBX)
1986	ABW Aruba	i114 Percent of main lines connected to automatic exchanges
1985	ASC Ascension	i1142 Percent of main lines connected to digital exchanges
1984	AUS Australia	i1143 Percent of main lines equipped for GCT

Years      Countries      Time series

- Using MS ACCESS application, we can:
  - Query/ extract data depending on users needs



## Data presentation - (ITU internal purposes)

A screenshot of a software window titled 'Reports Menu'. The window has a dark blue title bar with standard window controls. The main area is divided into six panes arranged in a 2x3 grid. The top row contains 'Country', 'Item', and 'Traffic'. The bottom row contains 'Company', 'Organization', and 'Others'. Each pane lists various report options. At the bottom, there is an 'Object:' label, a text field containing 'Click on a report', and 'Cancel' and 'OK' buttons.

Country	Item	Traffic
Country Notes	Single Time Series	DOT IC Page
Country Page (US\$)	Single time series Region Last	DOT OG Page
Country Page 5 years (by country)	Single time series Region Latest	DOT Pattern (OG & IC) Page
Country Page 5 years (by region)	Single Time Series Report - Decimal	DOT99 Tariff
Country Page ten years (by country)	Time Series by Item (10 years)	DOT99 Tariff\$
ICOM	Time Series by Item (all years)	DOT99 Traffic
Time Series by Country (IMF style report)	Time Series Notes By Item	Incoming Traffic
	TS by PTO items (region)	Outgoing Traffic Derived
		Outgoing Traffic Questionnaire
		Outgoing Traffic ten years
		Single Time Series Traffic

Company	Organization	Others
Company Page	Organizations by country	Labels for Publications
Company Report	Organizations by region	Statistical Contacts
Country by company	Organizations by region Bilingual	Equipment Exports
PTOs Income (any year/any top value)		Equipment Imports
PTOs International (any year/any top value)		Yearbook Country Check
PTOs Main lines (any year/any top value)		Yearbook Landscape
PTOs Mobile (any year/any top value)		L.) Yearbook by Country
Single time series by PTO		L.) Yearbook by Country 1 year only
Time series by operator by country		L.) Yearbook by Region
Time series by operator by region		L.) Yearbook by Region 1 year only
		Yearbook Portrait

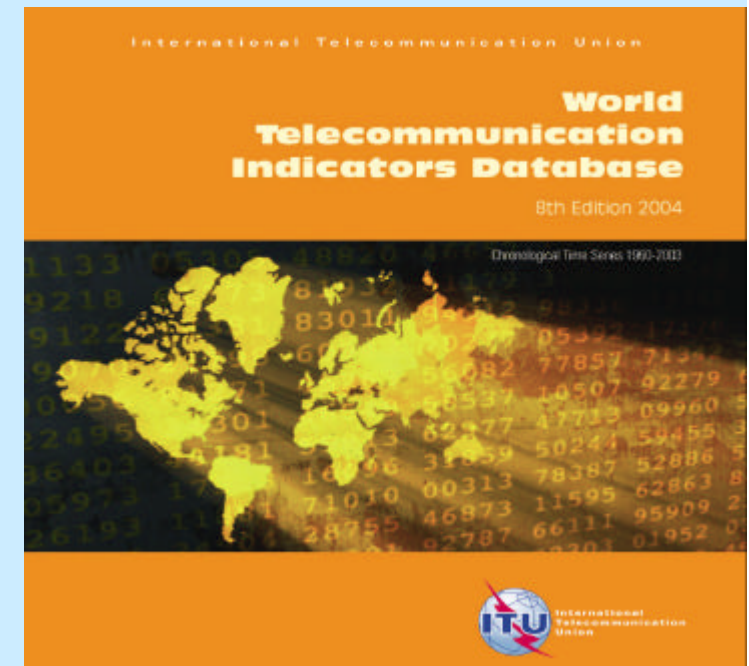
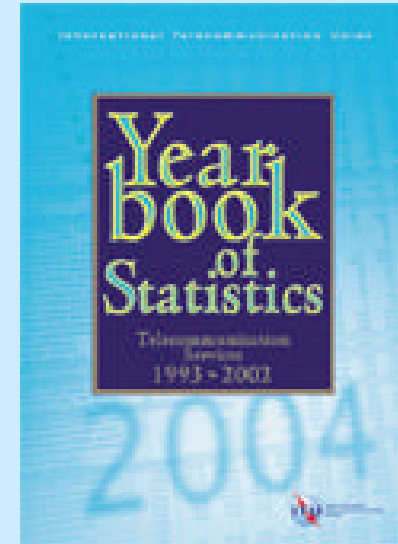
Object:

- Reports either by indicator, by country, by region and by operator can be generated using above window.



# Data dissemination

- **Yearbook of Statistics**
  - Published annually for almost 3 decades
  - Covers 80 ICT/telecom indicators for almost 200 economies
- **World Telecommunication Indicators Database**
  - Time series data for the years 1960, 1965, 1970 and annually from 1975-2003
  - Covers 80 ICT/telecom indicators for almost 200 economies
- Online, at [www.itu.int/ict/statistics](http://www.itu.int/ict/statistics)










# Dissemination - World Telecommunication Indicators

**Win\*STARS v4.2: ITU World Telecommunication Indicators 2002**

File Edit View Format Options Help Information

Query Result Map Tables    ?

Select: Countries Series **Years** Show Data

**209 of 209 countries/groups selected**

Afghanistan
Albania
Algeria
American Samoa
Andorra
Angola
Antigua and Barbuda
Argentina
Armenia

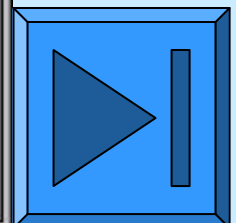
**42 of 42 years selected**

1993
1994
1995
1996
1997
1998
1999
2000
2001

**85 of 85 series selected**

% automatic main lines
% digital main lines
% of main lines in urban areas
% residential main lines
Annual telecommunication investment
Annual telecommunication investment (US\$)
Average annual exchange rate per US\$
Business telephone connection charge
Business telephone connection charge (US\$)
Business telephone monthly subscription
Business telephone monthly subscription (US\$)

Availability



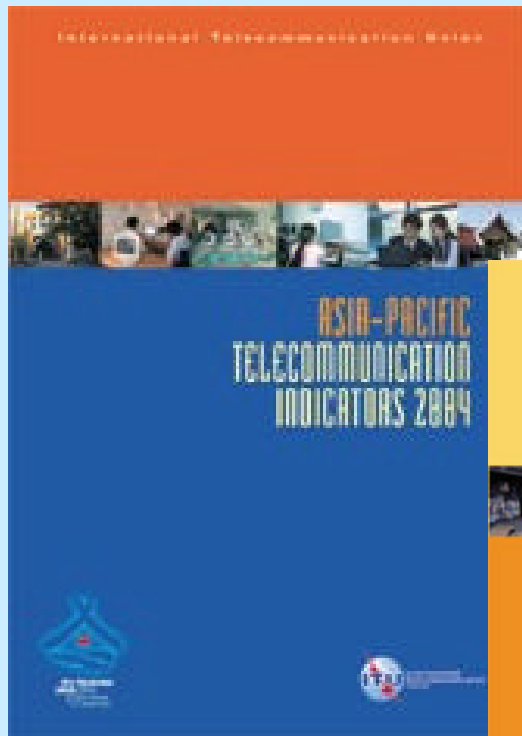


## Other forms of dissemination

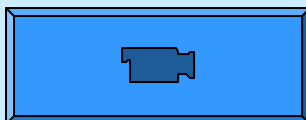
- Free statistics published in our ICT website for basic indicators, cellular subscribers, information technology and data for top operators (<http://www.itu.int/ITU-D/ict/statistics/>)
- Requests made by users either by phone, fax or email



# Analysis - Regional Publications

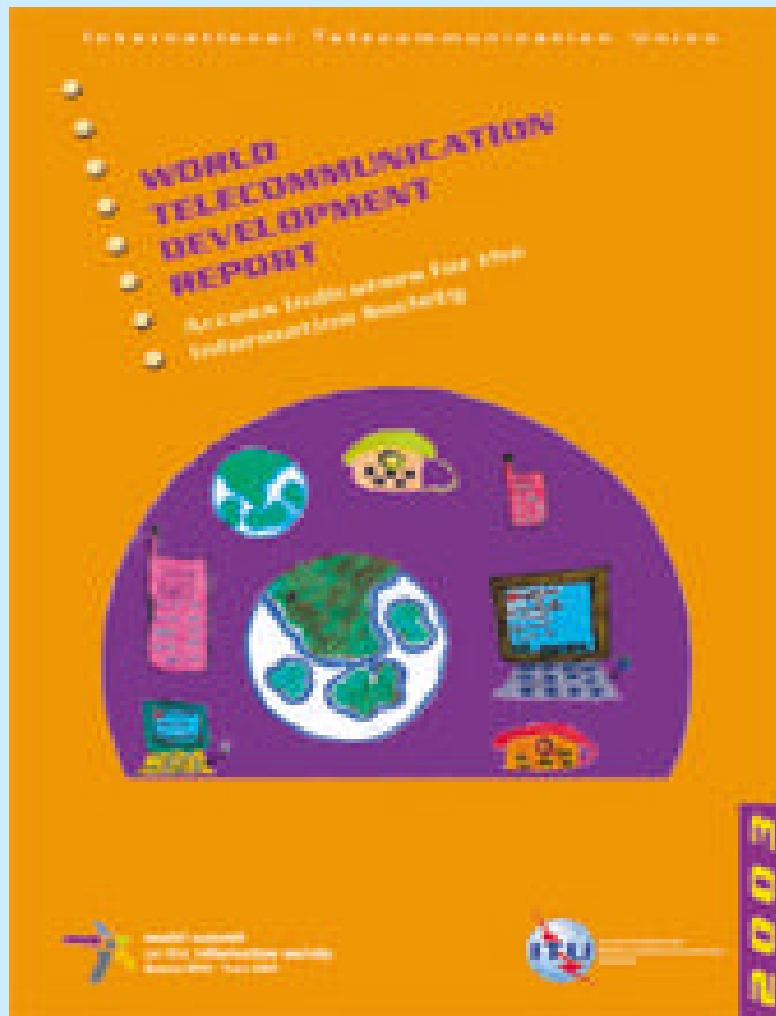


- Specifically prepared for regional Telecom events
- Contains 3 parts: Overview, regional statistics, directory of telecommunication operators
- **Africa Telecom Indicators 2004** released during Telecom Africa 2004
- Latest is **Asia Telecom Indicators 2004** released September 2004





# Analysis - (Global)

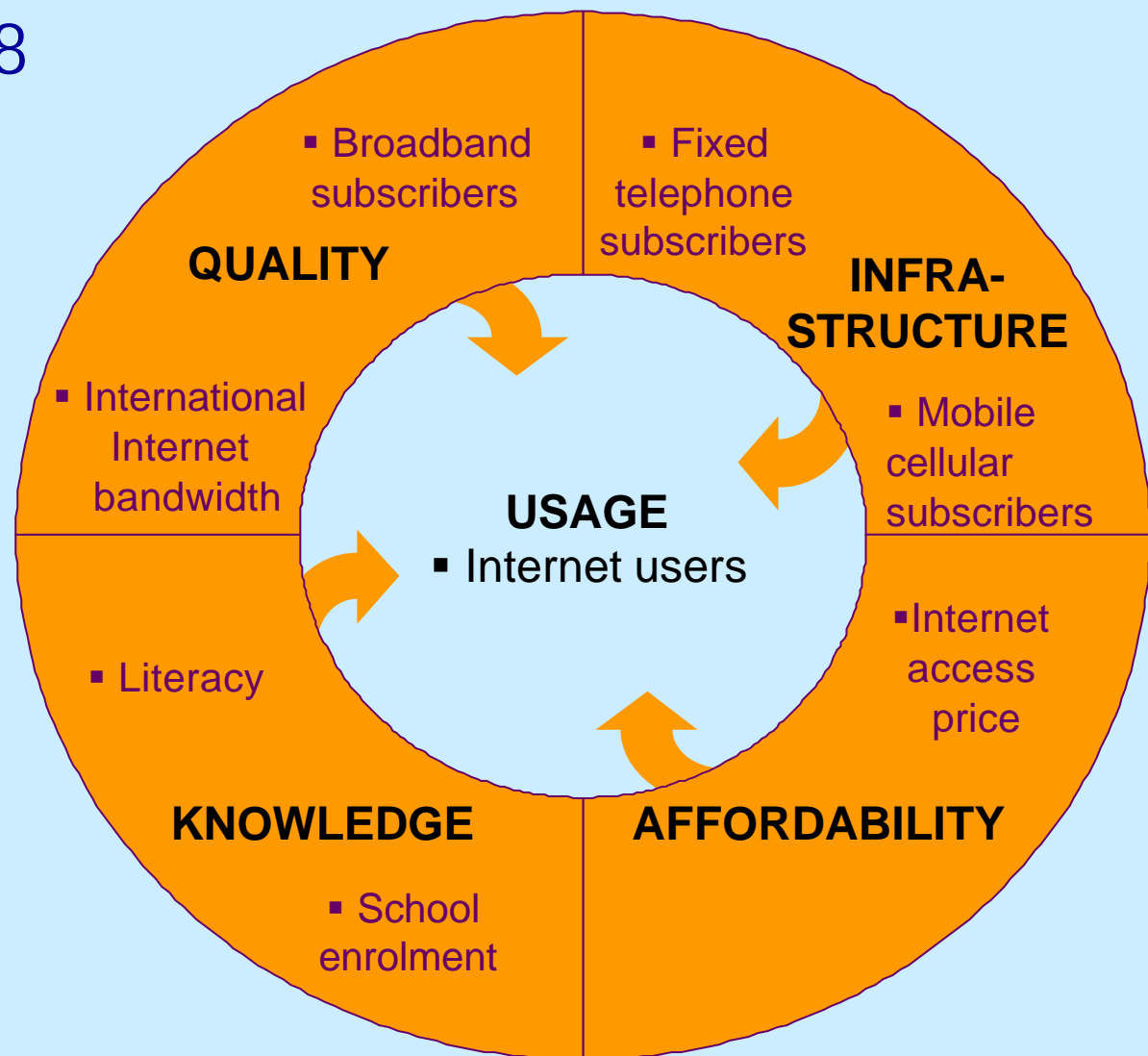


- World Telecommunication Development Report
- Contains overview of world telecom indicators
- Highlights topics relevant to global issues
- Latest released December 2003 during WSIS, Geneva
- Includes the first release of Digital Access Index (DAI)



# Digital Access Index, 2003

- The DAI ranks 178 economies according to their ability to access ICTs
- Based on 5 categories and 8 indicators
- Classifies economies into: high, upper, medium, low





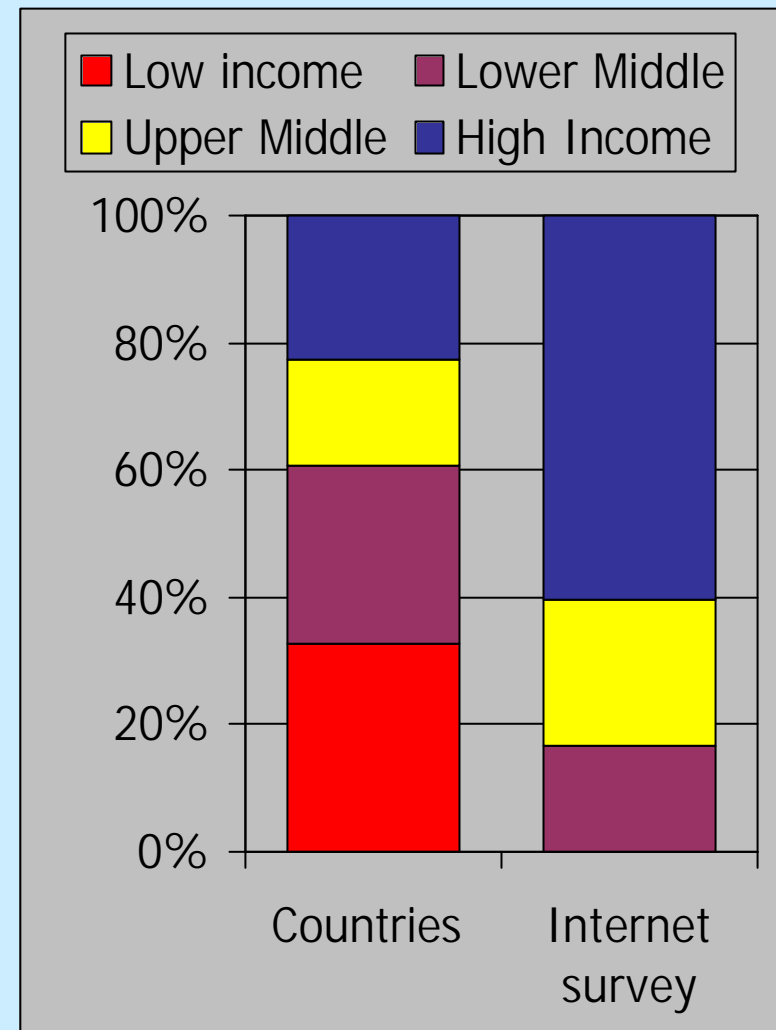
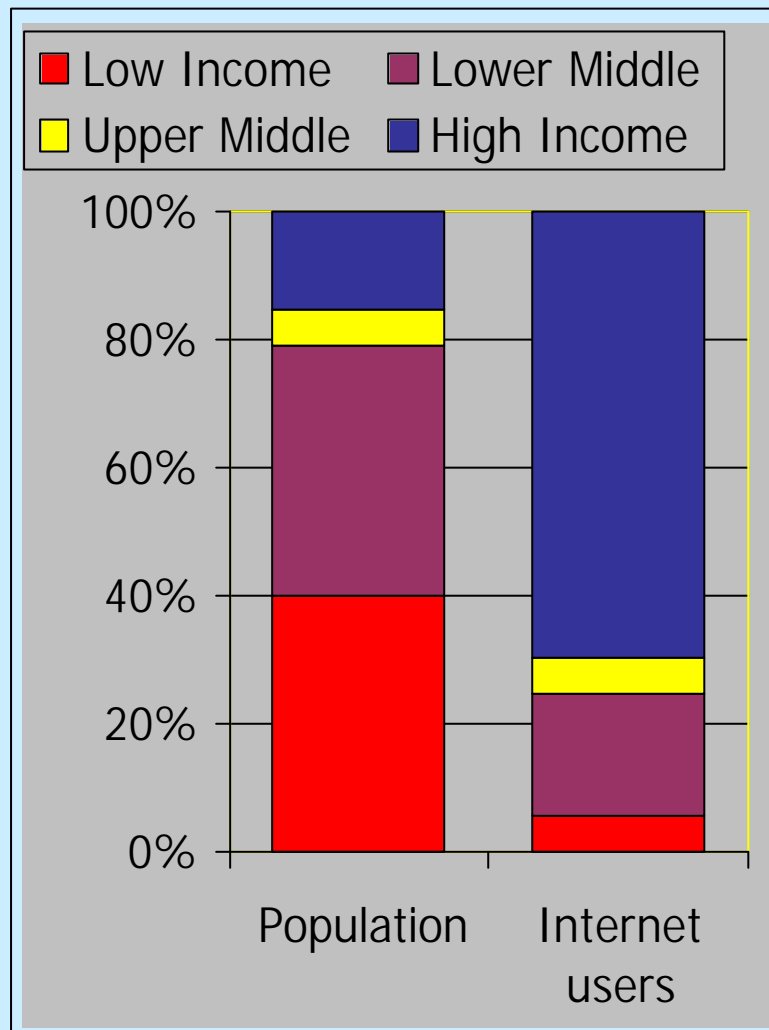


## Administrative data versus survey data

- Regulators/ministries can collect data through administrative records (data from operators)
- In certain areas administrative data needs to be complemented by surveys:
  - Internet usage (as opposed to subscription!)
  - ICT availability in households (PCs, Internet, etc)
  - Consumer satisfaction, household telecom expenditure
- Collaboration with National Statistical Office is crucial in carrying out surveys



# The digital divide and the statistical divide



Source: ITU, 2003.



## Who gets what

- Operators have access to national and regional telecommunication trends
  - Track market position and potential
  - International benchmarking exercises
- Regulators/ministries receive (national & regional) overview
  - Identify trends and benchmark results
  - Make informed policy decisions
  - Make regional/international comparisons
- Public is informed on trends and services
- Investors identify new market opportunities
- ITU fulfills its commitment with regard to bridging the digital divide



# Conclusion

- Focus on core indicators, avoid too many questions
- Close coordination between regulator/ministries and operators (optimal information supply)
- Indicators should be clearly defined
- Information needs to be consistent and comparable, in type, in form and in timeliness
- Consider international efforts to collect/harmonize ICT/Telecom statistics for maximum comparability (ITU)



## Other activities:

### International cooperation & coordination

- The Millennium Development Goals: ITU tracks target 18 of the MDGs
  - Main telephone lines, cellular subscribers, Internet users (for UN MDG database)
  - Prepares story-lines for UN Secretary General's report on MDG
- Partnerships: “Partnership on Measuring ICT for Development” (ITU, UNCTAD, UNESCO, OECD, World Bank, UN ICT Task Force, UN Regional Commissions, NSOs)
- World Telecom Indicators meeting (February 2005)

ITU Information and Communication Technology - Microsoft Internet Explorer

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Address <http://www.itu.int/ITU-D/ict/> Go Links

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Publications  
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 Presentations  
 Industry Sites and Links  
 Events

## Welcome to the Information and Communication Technology (ICT) Home Page

### ICT Indicators

The ITU's Telecommunication Indicator Reports present an analysis of trends and developments in the global telecommunications sector, backed by official statistics from the world's leading source of telecommunication information. These reports and databases are available online.

- **Partnership on Measuring ICT for Development**
- **UN Millennium Development Goals**  
[UN MDG Database](#)  
[ICT MDG Storyline](#) -
- [ICT and MDG \(Chapter 4 of the WTDR 2003\)](#) -
- [Register for notification of new publications](#)
- [Information sharing: a synopsis of our work](#)

### Publications

- [Yearbook of Statistics - Chronological Time Series 1993-2002](#) **New !**
- [African Telecommunication Indicators 2004 - Press Release](#)
- [World Telecommunication Development Report 2003: Access Indicators for the Information Society \(WTDR\) - Press Release](#)
- [Digital Access Index \(DAI\)](#)
- [World Telecommunication Indicators Database](#) - **Last update 30 June 2004**

### Event

- ▶ [Monitoring the Information Society: Data, Measurement and Methods \(Geneva, 8-9 September 2003\)](#)

**Telecommunication Indicators Handbook**  
 HTML ([English](#), [français](#), [español](#)), [PDF](#)

■ **Draft v1.1 March 2003**  
 Word ([English](#); [French](#); [Spanish](#))

■ **Draft Proposed additional indicators**

<http://www.itu.int/ict>