



**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
and other activities**

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Telecommunication Development Bureau**



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 Indicators is the main source of internationally comparable data on telecommunications



Data collection – How and what

HOW?

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

WHAT?

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

Data is entered into the World Telecommunication Indicators Database

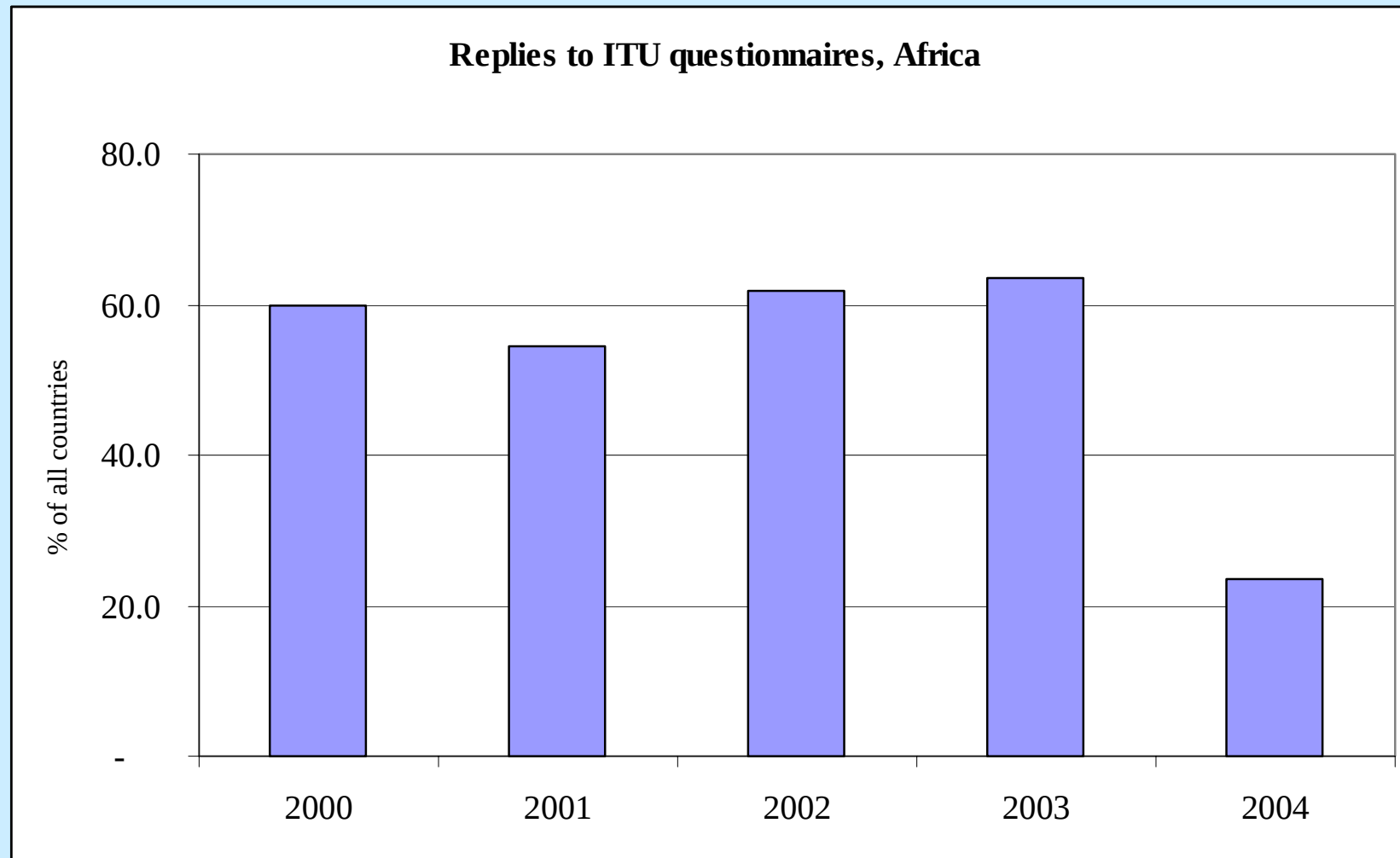


Data Collection - Challenges

- 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 ICT data hard to obtain from developing countries
- Not all national statistical agencies collect ICT statistics



Data Collection - Questionnaires

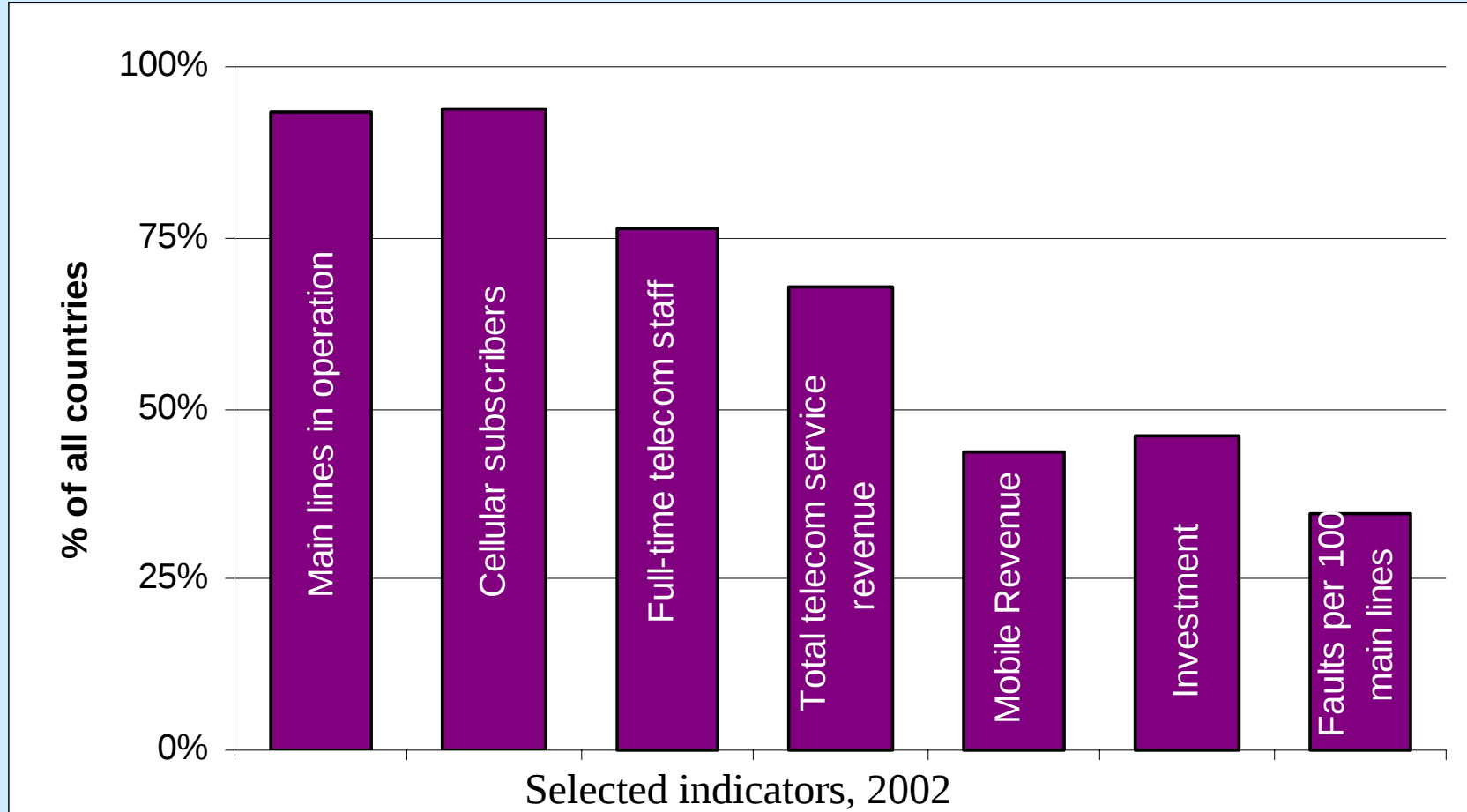


Source: ITU World Telecommunication Indicators database



Data Collection - Challenges

Incomplete data: Not All questions get answered





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 ICT environment
 - New indicators added
 - “Old” indicators kept in the database for future use



Data Retrieval - ITU purposes

Extract TS data

1 Series specifications 2 Query specification 3 Ciao Close Cancel

Click-select any fields below to start a list.

3 4 5

Select Select Select

2002	ZAA	_Africa	i111	Telephone stations (sets)
2001	ZLA	_Americas	i1110	Number of local public switching exchanges
2000	ZAP	_Asia	i1111	Percentage of households with a telephone
1999	ZEU	_Europe	i1111c	Residential main lines per 100 households
1998	ZNA	_Pacific	i1111m	Percentage of households with a mobile phone
1997	ZWO	_World	i1112	Public payphones
1996	AFG	Afghanistan	i1112a	Coin-operated payphones
1995	ALB	Albania	i1112b	Card-operated payphones
1994	DZA	Algeria	i1112c	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 connected to digital exchanges

Years Countries Time series

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



Data presentation - (ITU internal purposes)

Reports Menu

Country	Item	Traffic
Country Notes Country Page (US\$) Country Page 5 years (by country) Country Page 5 years (by region) Country Page ten years (by country) ICDM Time Series by Country (IMF style report)	Single Time Series Single time series Region Last Single time series Region Latest Single Time Series Report - Decimal Time Series by Item (10 years) Time Series by Item (all years) Time Series Notes By Item TS by PTO items (region)	DOT IC Page DOT OG Page DOT Pattern (OG & IC) Page DOT99 Tariff DOT99 Tariff\$ DOT99 Traffic Incoming Traffic Outgoing Traffic Derived Outgoing Traffic Questionnaire Outgoing Traffic ten years Single Time Series Traffic
Company	Organization	Others
Company Page Company Report Country by company PTDs Income (any year/any top value) PTDs International (any year/any top value) PTDs Main lines (any year/any top value) PTDs Mobile (any year/any top value) Single time series by PTO Time series by operator by country Time series by operator by region	Organizations by country Organizations by region Organizations by region Bilingual	Labels for Publications Statistical Contacts Equipment Exports Equipment Imports Yearbook Country Check Yearbook Landscape L.) Yearbook by Country L.) Yearbook by Country 1 year only L.) Yearbook by Region L.) Yearbook by Region 1 year only Yearbook Portrait

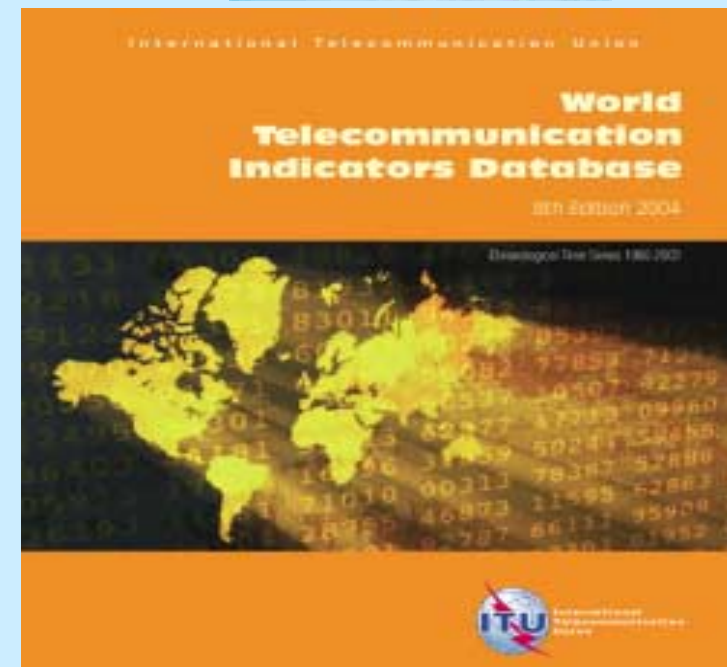
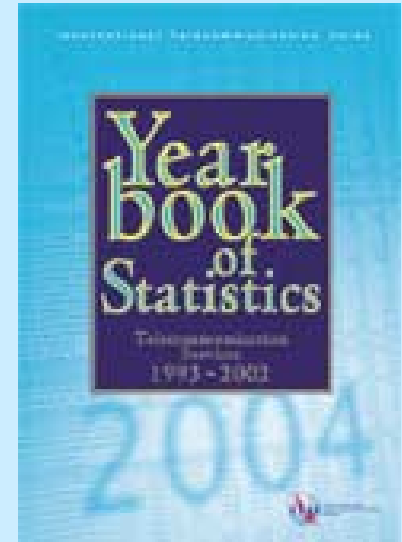
Object:

- 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





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

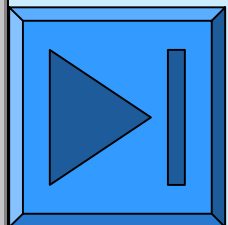
42 of 42 years selected

1993
1994
1995
1996
1997
1998
1999
2000
2001

85 of 85 series selected

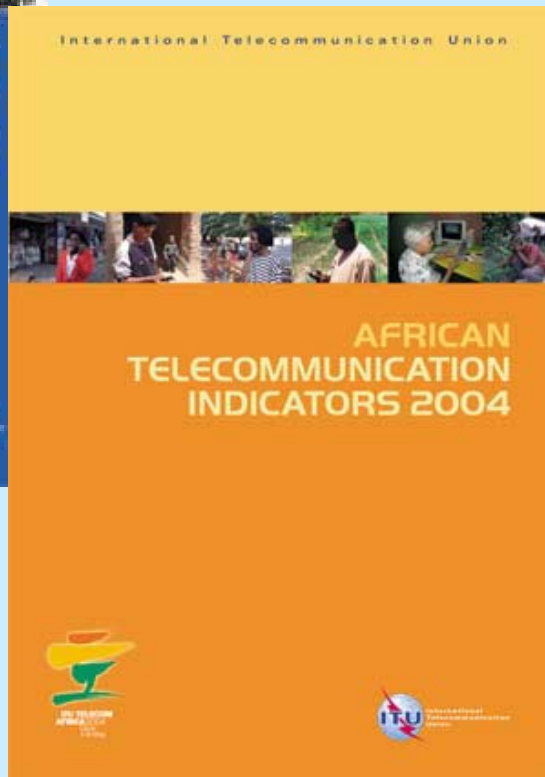
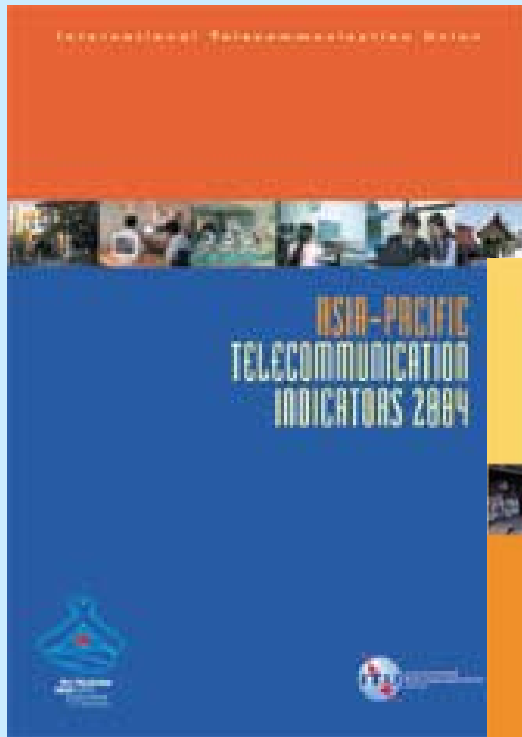
% automatic main lines
% digital main lines
% of main lines in urban areas
% residential main lines
Annual telecommunication investment
Annual telecommunication investment (US\$)
Average annual exchange rate per US\$
Business telephone connection charge
Business telephone connection charge (US\$)
Business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

Availability

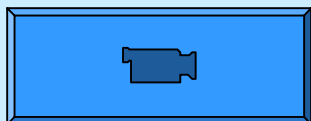




Dissemination - Regional Publications



- Regional Telecommunication Indicators
 - Specifically prepared for regional Telecom events
 - Contains 3 parts: Overview, regional statistics and directory of telecommunication operators
 - Asia Pacific Telecommunication Indicators 2002 released in Telecom Asia 2002





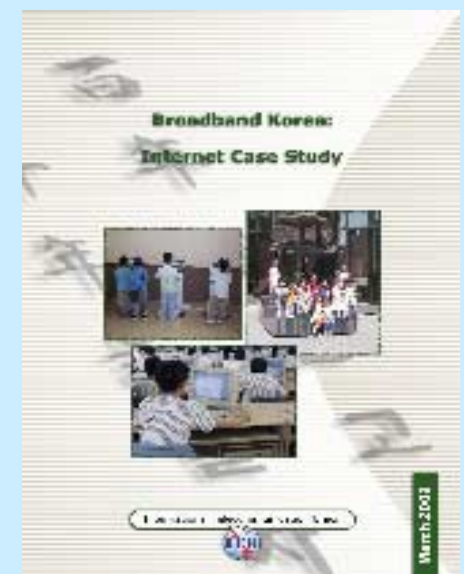
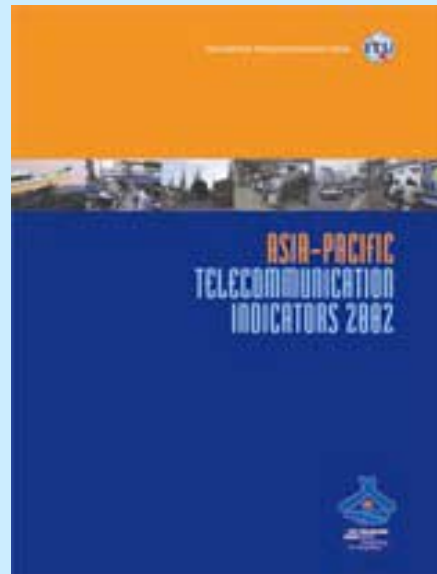
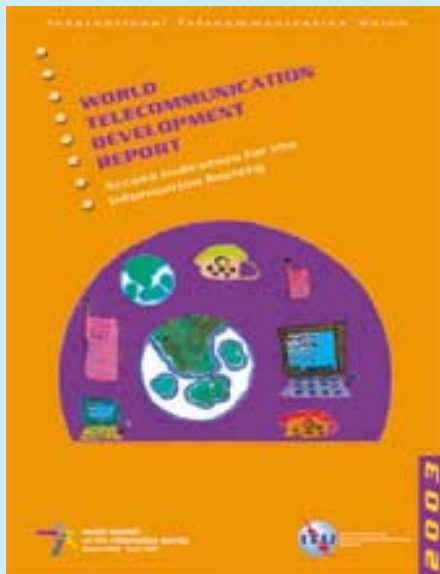
Other forms of dissemination

- 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

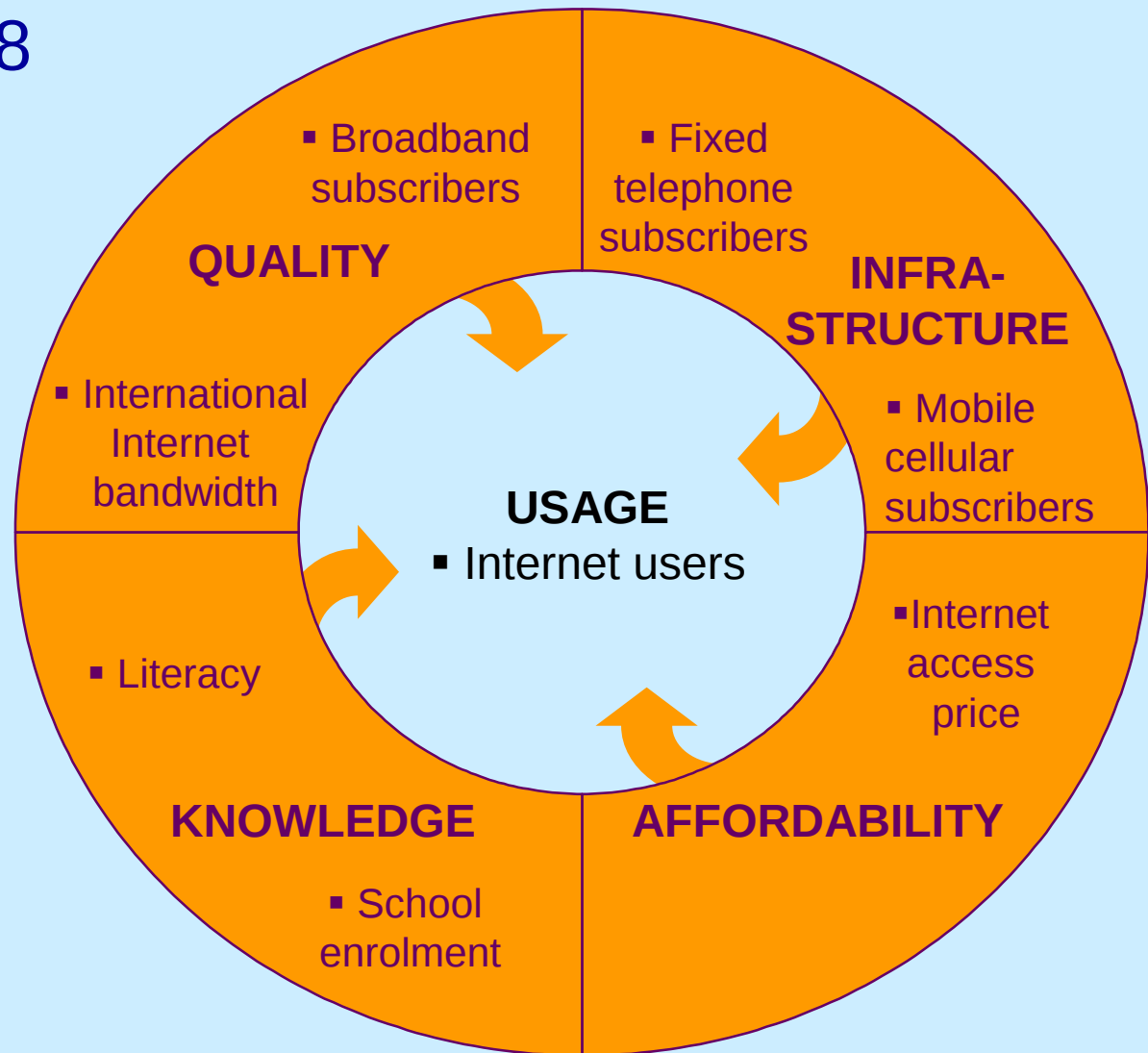
- Analysis
 - World Telecommunication Development Report
 - Regional Reports on ICT/telecom developments
 - Case Studies (www.itu.int/ict/cs)





Analysis - 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





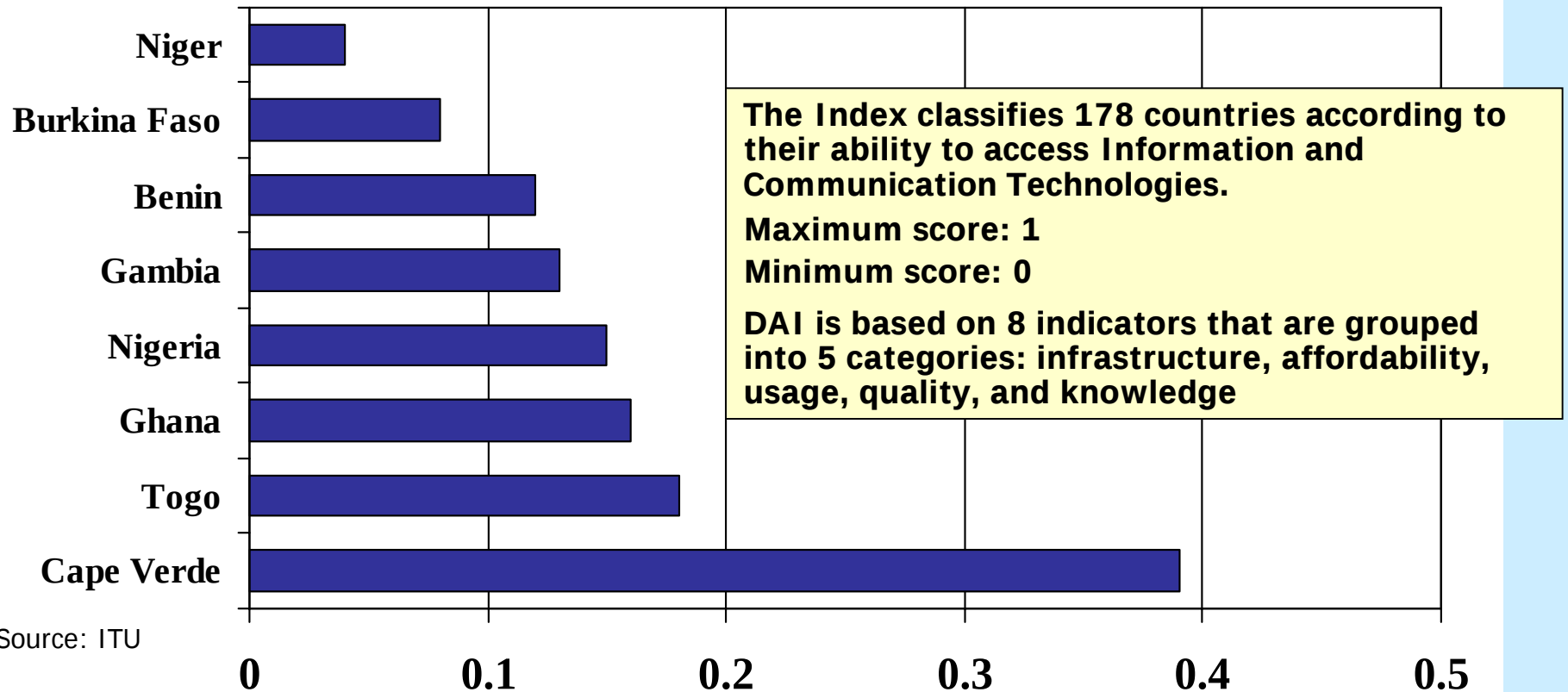
DAI Top 20

	Economy	Infra-structure	Afford-ability	Know-ledge	Quality	Usage	DAI
1	Sweden	0.94	0.99	0.99	0.64	0.67	0.847
2	Denmark	0.89	0.99	0.99	0.66	0.60	0.828
3	Iceland	0.89	0.99	0.96	0.50	0.76	0.820
4	Korea (Rep.)	0.74	0.99	0.96	0.74	0.65	0.817
5	Norway	0.84	0.99	0.99	0.55	0.59	0.793
6	Netherlands	0.78	0.99	0.99	0.61	0.60	0.792
7	Hong Kong, China	0.93	1.00	0.83	0.68	0.51	0.790
8	Finland	0.81	0.99	0.99	0.55	0.60	0.786
9	Taiwan, China	0.98	0.99	0.95	0.56	0.45	0.786
10	Canada	0.69	0.99	0.97	0.64	0.60	0.779
19	Australia	0.75	0.99	0.99	0.42	0.57	0.74
20	Belgium	0.75	0.99	0.99	0.63	0.36	0.74



DAI – Some results

DAI rankings for selected African countries





Administrative data versus survey data

- Regulators/ministries can collect data through administrative records (regular data supply 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



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



International cooperation & coordination

- International cooperation and coordination
 - The Millennium Development Goals: ITU tracks target 18 of the MDGs
 - World Summit on the Information Society (WSIS)
 - Partnerships: “Partnership on Measuring ICT for Development” (ITU, UNCTAD, OECD, World Bank etc.)
 - Conferences/workshops/meetings



Conclusion

- Avoid information overload (focus on core indicators)
- 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)



International Telecommunication Union

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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](#)

■ [Telecommunication Indicators Handbook](#)

HTML ([English](#), [français](#), [español](#)), [PDF](#)

■ [Draft v1.1 March 2003](#)

Word ([English](#); [French](#); [Spanish](#))

■ [Draft Proposed additional indicators](#)

What's New

Publications

- [Yearbook of Statistics - Chronological Time Series 1993-2002](#)



- [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 \(Geneva, 8-9 December 2003\)](#)

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