

# Measuring the Information Society Report

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# MIS Report 2014 **statistical highlights**

## Mobile broadband is driving ICT growth

- Global mobile-broadband penetration increased from 9% to 32% in the last five years
- Africa stands out with a mobile-broadband growth rate of over 40% in 2014
- 3G progressing in developing countries, and mobile-broadband penetration 21%
- 3G+ techs driving mobile-broadband penetration in developed countries: 84% in 2014

## Internet access and use growing steadily

- Almost 44 per cent of the world's households have Internet access at home
- Growth driven by developing countries in 2014: 14% as against 4% in developed countries
- Internet users doubled in five years to reach 3 billion, 2/3 live in developing countries

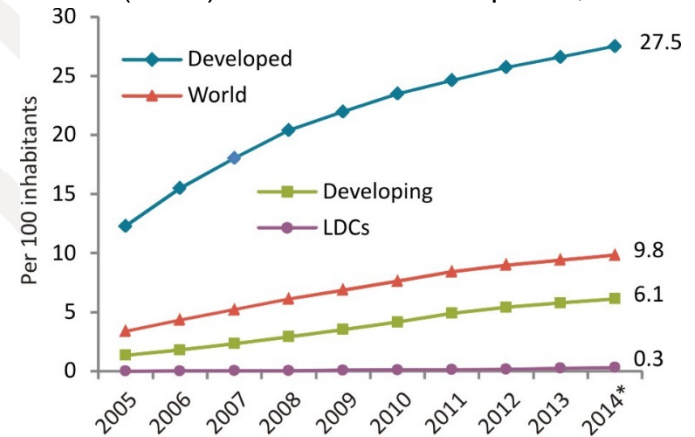
## Mobile-cellular and fixed-broadband uptake slowing down

- Growth in mobile penetration slows to a ten-year low of 2.6%
- Mobile markets have reached saturation with almost 7 billion subscriptions
- Fixed-broadband growth rates have dropped to 6% in developing countries, despite penetration remaining low (6%) in the developing world
- Fixed broadband has reached mature levels in developed countries: 27.5% penetration and continuous low growth (3.4%)

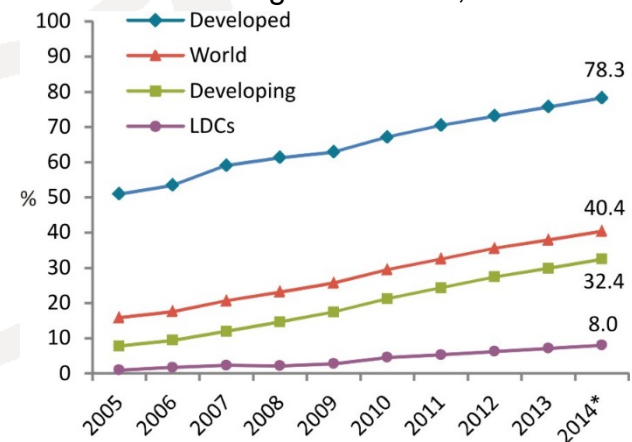
# The digital divides

- 450 million people worldwide without access to mobile services
- <1% fixed-broadband penetration in least developed countries (LDCs)
- Rural-urban divide: lower 3G coverage, smaller proportion of households with Internet access and fewer enterprises and schools connected in rural areas.
- 4.3 billion people worldwide are not yet using the Internet, 90% live in the developing world

Fixed (wired)-broadband subscriptions, 2005-2014\*



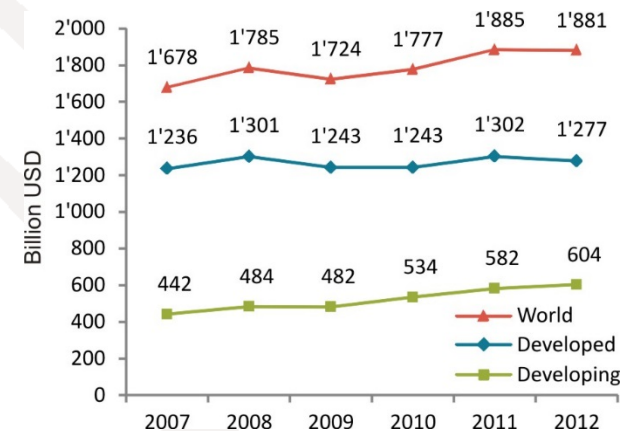
Individuals using the Internet, 2005-2014\*



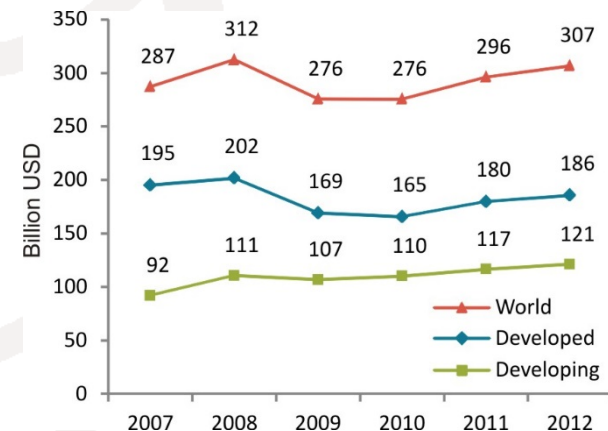
# Investment and revenue trends

- Total telecommunication revenues have stagnated at USD 1.88 trillion, 2.7% of world GDP
- The sector returned to negative growth in developed countries, whereas revenues in developing countries increased by 4% in 2012
- Global investment in telecommunications grew by 4% to reach USD 307 billion in 2012
- The developing countries' share in total investment reached almost 40% and an all-time high value of USD 121 billion

Telecommunication revenues, 2007-2012



Investment by telecommunication operators, 2007-2012



# The ICT Development Index (IDI)

- 11 indicators, covering 3 areas:
  - ICT access, use and skills
- 166 economies
- Comparison of data from 2013 and 2012
- Regional analysis
- Assessment of the relationship between geography and population and IDI performance
- Analysis of the link between IDI and the MDGs

# Almost all countries improved in the IDI but Least Connected Countries lag behind

## IDI 2013 top ten

1. Denmark
2. Korea (Rep.)
3. Sweden
4. Iceland
5. United Kingdom
6. Norway
7. Netherlands
8. Finland
9. Hong Kong, China
10. Luxembourg

## Key findings

- Top IDI performers have high income levels, competitive markets and a skilled population
- Effective implementation of policies to achieve ambitious ICT targets help drive national information economies
- Some 2.5 billion people living in the world's least connected countries (LCCs) need targeted policies for improved access to ICTs



# Wireless broadband drives IDI progress in **dynamic countries**, most of which are from the developing world

Most dynamic countries - changes between IDI 2013 and 2012

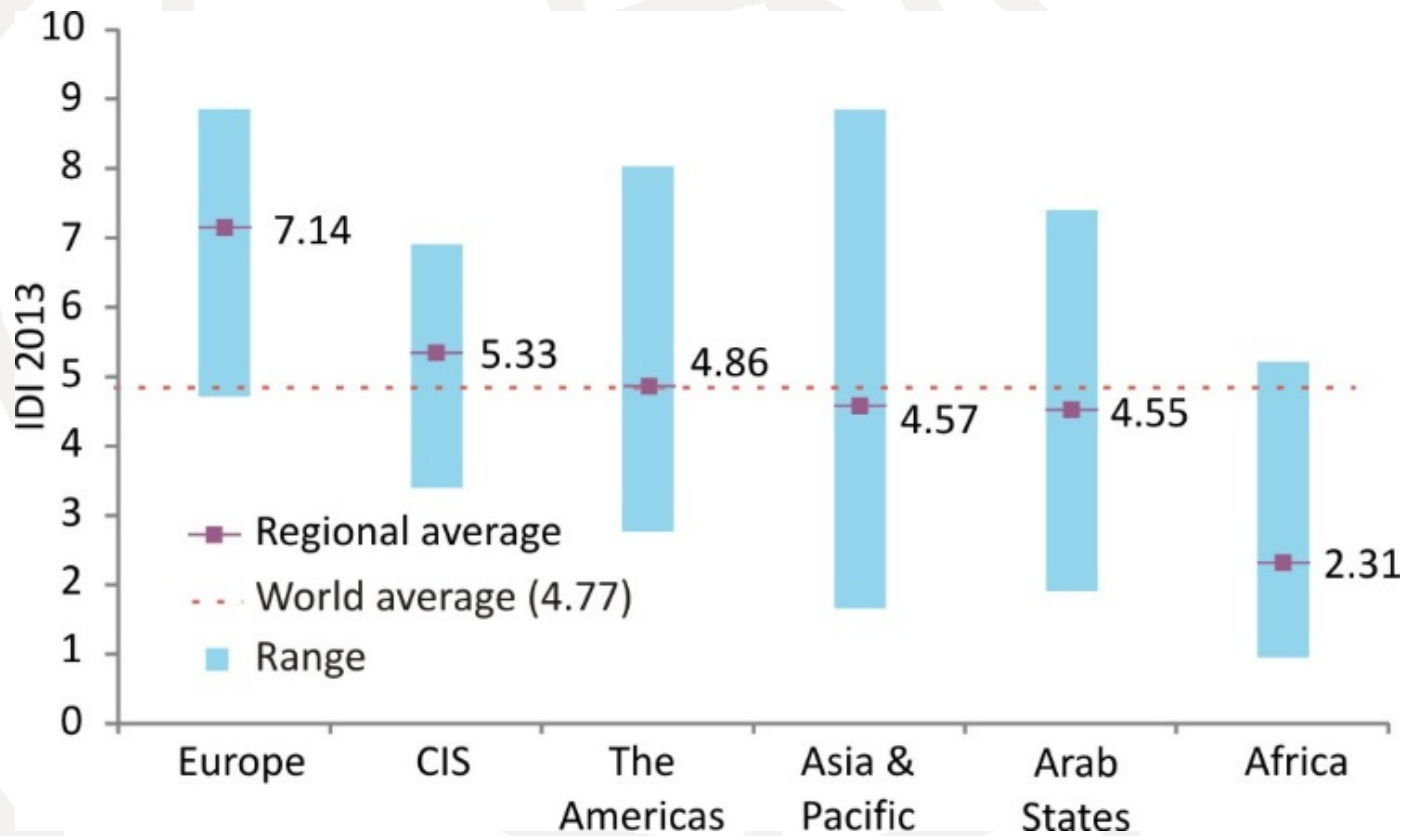
Change in IDI ranking			Change in access ranking			Change in use ranking		
IDI rank 2013	Country	IDI rank change	Access rank 2013	Country	Access rank change	Use rank 2013	Country	Use rank change
32	United Arab Emirates	14	47	Oman	16	71	Thailand	34
91	Fiji	12	101	Cape Verde	7	72	Fiji	24
93	Cape Verde	11	124	Gambia	7	142	Burkina Faso	13
81	Thailand	10	22	Qatar	6	79	Cape Verde	12
52	Oman	9	28	Estonia	5	24	United Arab Emirates	12
34	Qatar	8	64	Seychelles	5	134	Congo (Rep.)	11
38	Belarus	5	97	Albania	4*	111	Bhutan	8
69	Bosnia and Herzegovina	5	38	Belarus	4*	30	Qatar	8
78	Georgia	5	112	Bolivia	4*	61	Antigua & Barbuda	7**

Note: \* In the access sub-index, Mali, Mexico, Nepal, Nigeria, the Russian Federation and Uruguay also went up four places between 2012 and 2013. \*\*In the use sub-index, Belarus and Oman also went up seven places.

Source: ITU MIS Report 2014

# Regional IDI

IDI ranges and averages, by region and compared to world average, 2013



Source: ITU MIS Report 2014



# Top five per region

The top five economies in each region and their ranking in the global IDI, 2013

Regional IDI rank	Europe	Global IDI rank	Asia & Pacific	Global IDI rank	The Americas	Global IDI rank	Arab States	Global IDI rank	CIS	Global IDI rank	Africa	Global IDI rank
1	Denmark	1	Korea (Rep.)	2	United States	14	Bahrain	27	Belarus	38	Mauritius	70
2	Sweden	3	Hong Kong, China	9	Canada	23	United Arab Emirates	32	Russian Federation	42	Seychelles	75
3	Iceland	4	Japan	11	Barbados	35	Qatar	34	Kazakhstan	53	South Africa	90
4	United Kingdom	5	Australia	12	Uruguay	48	Saudi Arabia	47	Moldova	61	Cape Verde	93
5	Norway	6	Singapore	16	St. Kitts and Nevis	54	Oman	52	Azerbaijan	64	Botswana	104

Source: ITU MIS Report 2014

# There is a strong relationship between the IDI and many MDG indicators

## Goal 4: Reduce child mortality

- 4.1 Under-five mortality rate
- 4.2 Infant mortality rate
- 4.3 Proportion of 1 year-old children immunized against measles

## Goal 5: Improve maternal health

- 5.1 Maternal mortality ratio
- 5.2 Proportion of births attended by skilled health personnel
- 5.4 Adolescent birth rate
- 5.5 Antenatal care coverage (at least one visit and at least four visits)

## Goal 6: Combat HIV/AIDS, malaria and other diseases

- 6.1 HIV prevalence among population aged 15-49 years old
- 6.9 Incidence, prevalence and death rates associated with tuberculosis
- 6.10 Proportion of tuberculosis cases detected and cured under directly observed treatment short course

## Goal 1: Eradicate extreme poverty and hunger

- 1.1 Proportion of population below \$1 (PPP) per day
- 1.1 Population below national poverty line
- 1.2 Poverty gap ratio
- 1.6 Proportion of employed people living below 1\$ per day
- 1.9 Proportion of population below minimum level of dietary energy consumption

## Goal 7: Ensure environmental sustainability

- 7.2 CO2 emissions, metric tons of CO2 per capita
- 7.8 Proportion of population using an improved drinking water source
- 7.9 Proportion of population using improved sanitation facility

IDI

Significant partial correlations between IDI and MDG indicators

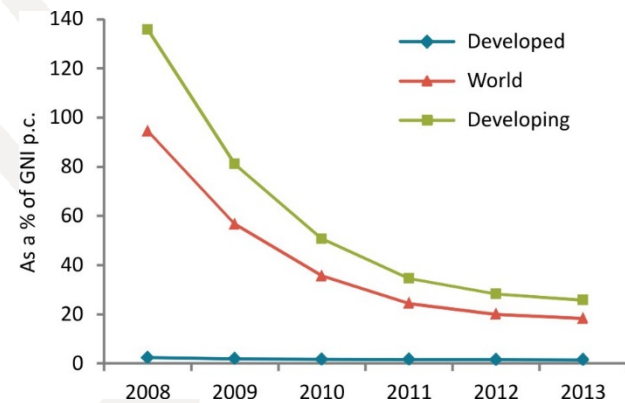
## Fixed-broadband prices continue to decrease and entry-level speeds are increasing

- From 2008 to 2012, entry-level fixed-broadband prices decreased by 20% per year on average in developing countries
- In 2013, there was a slowdown: price in developing countries decreased by only 4%
- 1 Mbit/s was the most common entry-level speed in 2013, compared with 256 kbit/s in 2008

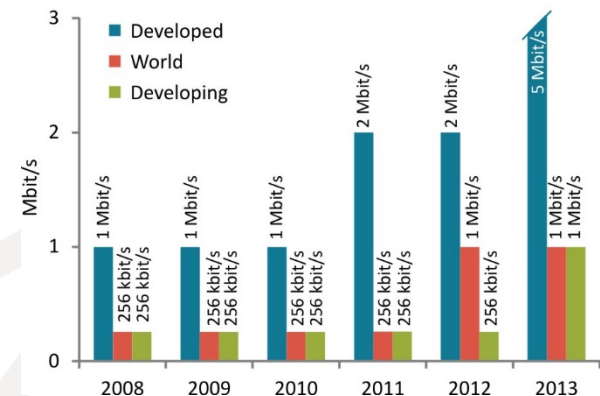
But:

- The price of a basic plan corresponds to >5% GNI p.c. in most developing countries

Fixed-broadband prices as a % of GNI p.c.



Most common entry-level fixed-broadband speed



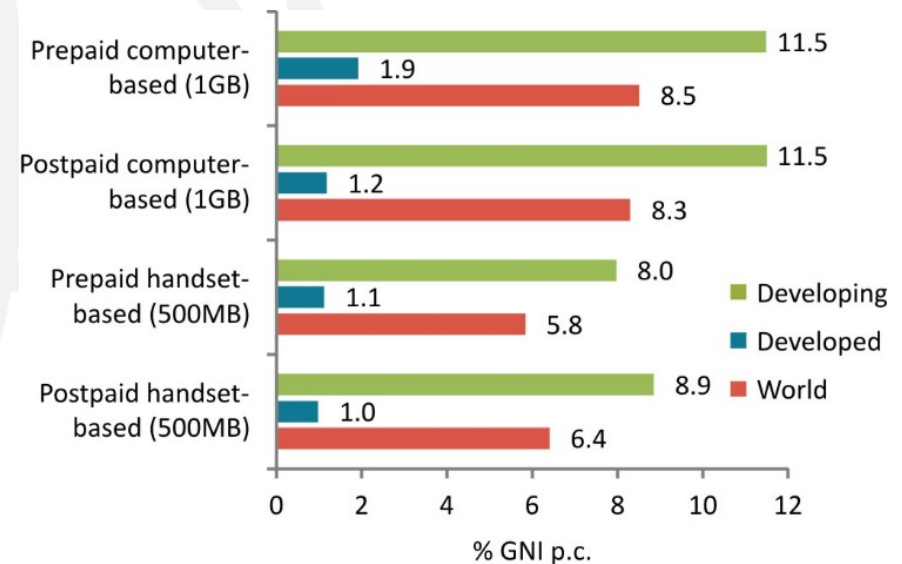
# Mobile-broadband prices in developed countries six times more affordable than in developing countries

- The number of developing countries offering mobile-broadband plans increased by 20% from 2012 to 2013
- The price of mobile-broadband plans corresponds on average to >5% of GNI p.c. in the developing world

But:

- In almost half of the African countries, mobile-broadband is more than USD 10 per month cheaper than fixed broadband

Mobile-broadband prices as a % of GNI p.c.



Source: ITU MIS Report 2014

# Income inequalities contribute to making broadband unaffordable

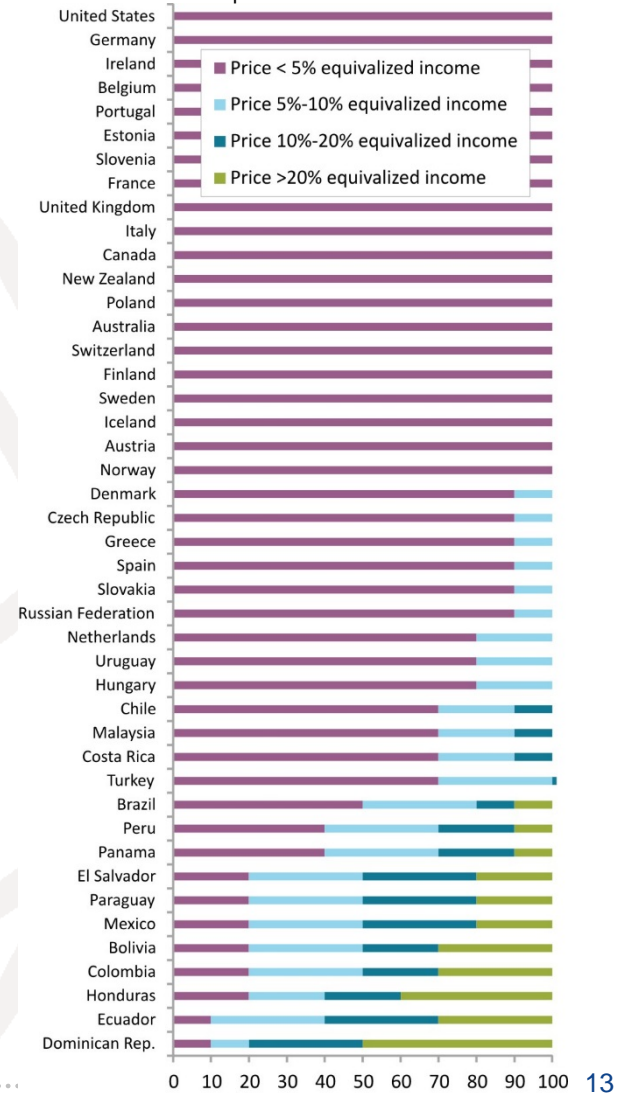
- Fixed-broadband is affordable for the 20% households with highest income in most developing countries

**but** unaffordable for the 20% households with lowest incomes in almost all developing countries

- Handset-based mobile-broadband prices are affordable for almost all households in the developed world

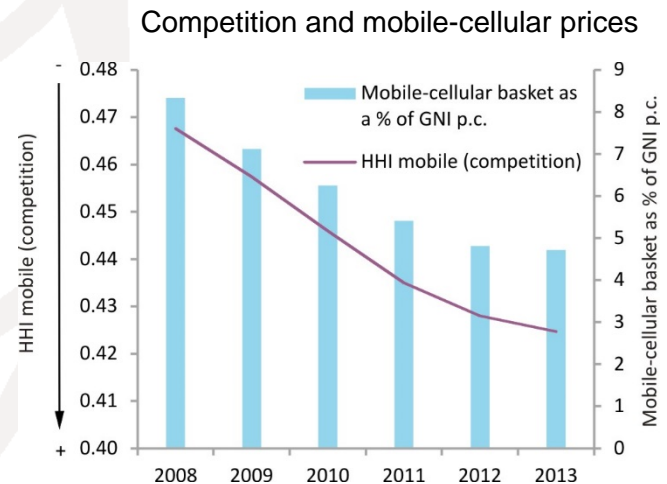
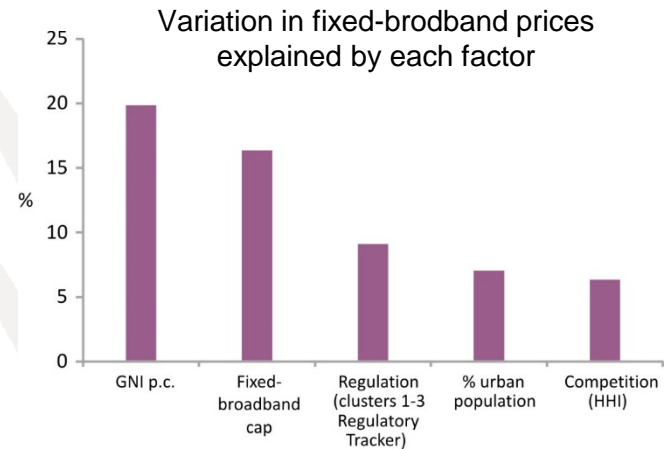
**but** unaffordable for some segments of the population in the developing world

Prepaid handset-based mobile-broadband prices as % of equivalized household income



# Competition and regulation are key drivers of affordable ICT prices

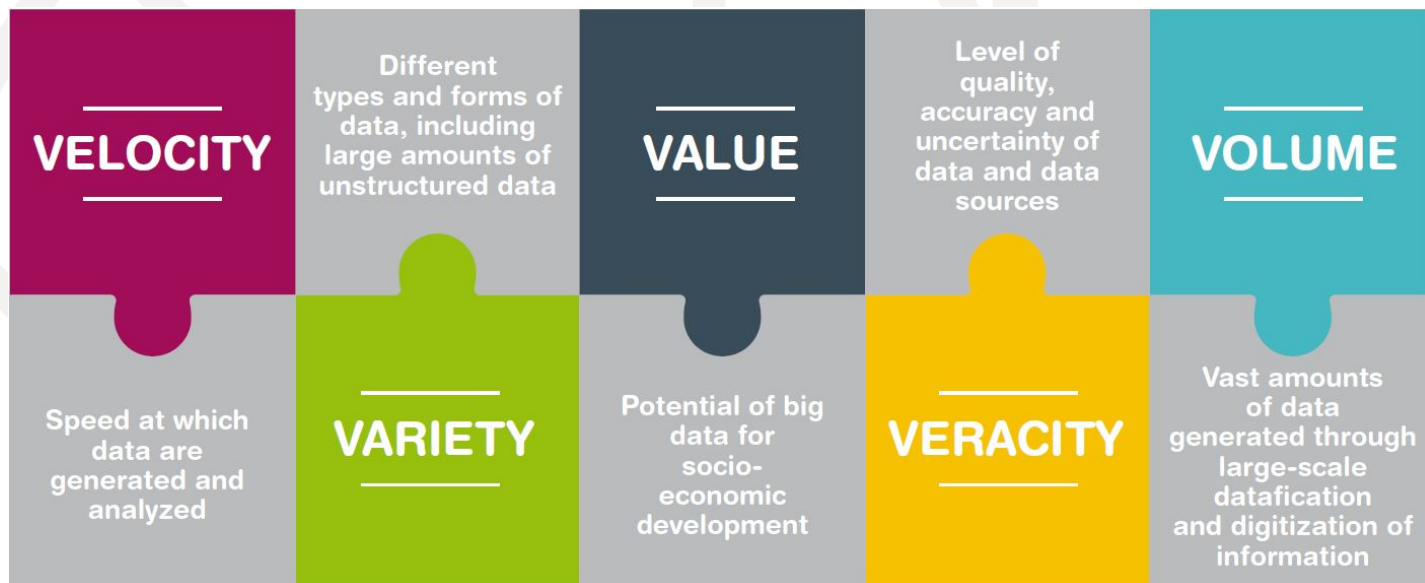
- Fixed-broadband prices could be reduced by 10% if competition and the regulatory framework in developing countries improved
- An increase in competition in developing countries could lead to a 5% reduction in mobile-cellular prices
- International regulatory best practices, such as the ones adopted at the ITU Global Symposium for Regulators, may serve as guidelines for effective regulatory frameworks





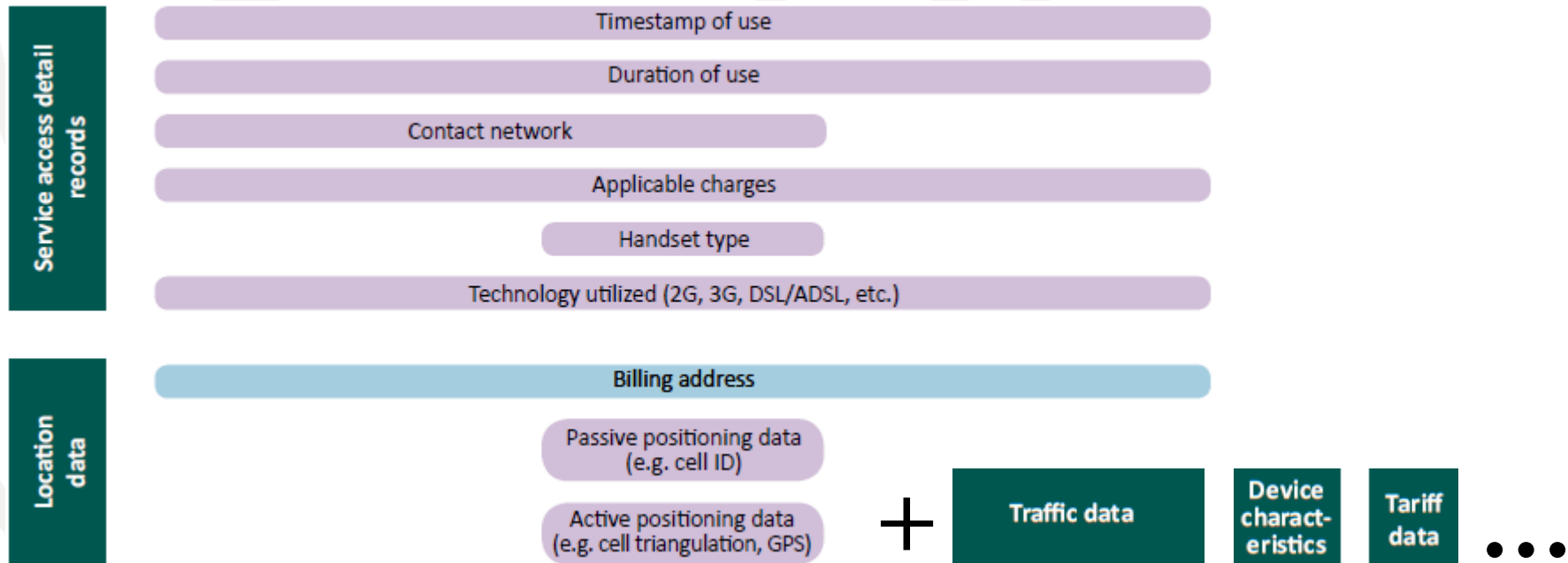
# Big data for development

- Big data are the result of an increasingly **digitized world**
- Big data hold great promise for **improving** the timeliness and completeness of **official statistics**
- Big data can be used for formulating social and economic **development policy**



# Big data from the ICT sector

- The ICT sector is one of the richest sources of big data
- **Data from mobile operators are real-time and low-cost**, and are an area with huge development potential



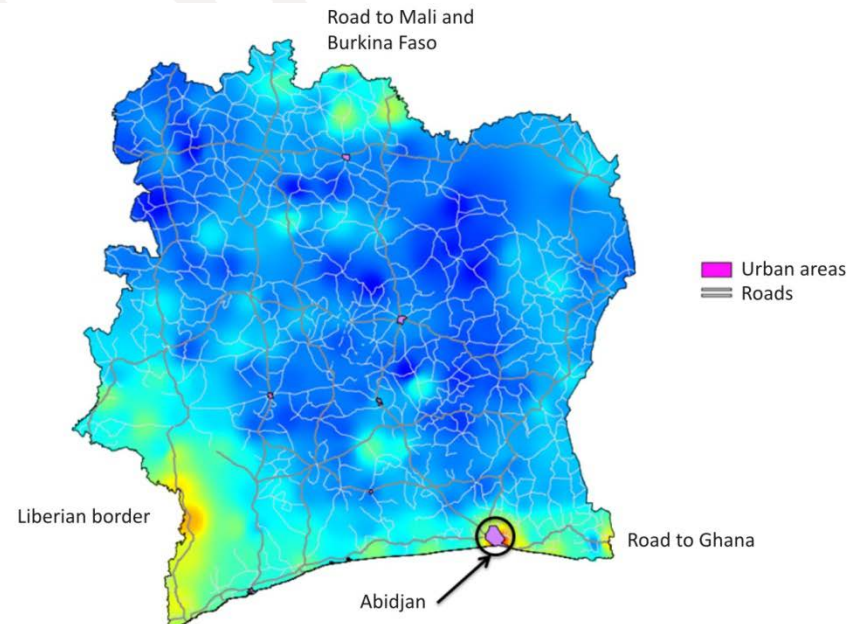
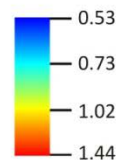
Source: ITU, adapted from Naef et al. (2014).

# Use of big data from mobile operators

- Mobile data can reveal new insights into the digital divide
- Mobile data can reveal socio-economic information about mobile users

Example: **Poverty mapping**  
in Côte d'Ivoire using mobile-  
network data

Average of purchase  
averages (USD)



Source: Gutierrez et al. (2013).

# Big data from the ICT sector: development potential and challenges

## Potential

- Telecommunication operators, Internet companies and content providers are a **rich source for big data**
- **Data from mobile operators** are real-time and low-cost, and are an area with huge development potential
- Big data could reveal new insights into the **digital divide**

## Challenges

- **Privacy issues** remain the biggest challenge
- **Public-private partnerships** are required to harness the potential of big data
- Cooperation among **international stakeholders**

For further information:

indicators[at]itu.int

[www.itu.int/ict](http://www.itu.int/ict)